DOCUMENT RESUME

ED 151 541 CE 015 069

AUTHOR Adams, Susan B.
TITLE An Analytical Research Project to Assess the Impact of Practical Arts Programs in the Commonwealth of Kentucky. Final Report.
INSTITUTION Western Kentucky Univ., Bowling Green. Center for Career and Vocational Teacher Education.
SPONS AGENCY Kentucky State Dept. of Education, Frankfort. Bureau of Vocational Education.
PUB DATE Jun 77
NOTE 80p.

EDRS PRICE MF-$0.83 HC-$4.67 Plus Postage.
DESCRIPTORS *Academic Achievement; Career Education; *Career Exploration; Educational Research; Industrial Arts; Junior High Schools; Occupational Guidance; *Program Effectiveness; Program Evaluation; State Programs; *Student Attitudes; *Teacher Attitudes; *Vocational Development
IDENTIFIERS Kentucky

ABSTRACT

A six-month study of the Kentucky State Department of Education programs in practical arts education (career exploration) in junior high schools was done in two parts. In the first part a questionnaire was given to teachers, counselors, students, and principals from twenty schools during the 1976-77 school year. The questionnaire was designed to poll programmatic aspects of the state practical arts program and to monitor attitudes relative to program effectiveness, acceptance, and degree of impact upon students. In general, the respondents were satisfied with most aspects of the program; however, the students felt more supplies, materials, equipment, and career information were needed. The second part of the study involved two administrations of an instrument entitled the Assessment of Career Development (ACD). The ACD was first given to a sample of Kentucky non-practical arts students in 1975. Later that year a sample of students involved in the practical arts program were administered the ACD. Students with practical arts education experience scored higher on the ACD than those who were not in the practical arts program. In addition, national norm mean scores were higher than practical arts student mean scores in all but one area of exploratory occupational experiences, but the practical arts students' scores were higher than national norm mean scores in all but one cognitive area measured by the ACD. (BB)

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FINAL REPORT

AN ANALYTICAL RESEARCH PROJECT TO ASSESS THE IMPACT OF PRACTICAL ARTS PROGRAMS IN THE COMMONWEALTH OF KENTUCKY

by

Susan B. Adams
Project Administrator

June, 1977
Center for Career and Vocational Teacher Education
Western Kentucky University
Bowling Green, Kentucky
42101

Project Number D98811

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COMMONWEALTH OF KENTUCKY
STATE DEPARTMENT OF EDUCATION
BUREAU OF VOCATIONAL EDUCATION

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ACKNOWLEDGEMENTS

This researcher wishes to express appreciation to the numerous teachers, principals, counselors, and students involved in this study who provided such an outstanding degree of support and participation in the survey aspect of this project.

Special appreciation is extended to Stephen C. Skiles and Deborah Frizzell, Graduate Research Assistants, whose diligent and conscientious performance greatly facilitated the conduct of this project.

The researcher wishes to extend a special note of gratitude to her colleagues, Mr. Roger D. Vincent, Research Associate, Center for Career and Vocational Teacher Education; Dr. Ronald D. Adams, Director, Office of Educational Research; and Mr. Robert A. Cobb, Research Associate, Center for Career and Vocational Teacher Education, for their outstanding support, direction, and assistance in the conduct of this research. A special acknowledgement is also expressed to Dr. Norman D. Ehresman, Director, Center for Career and Vocational Teacher Education, for his wise guidance and support provided to this researcher.

A special word of gratitude is expressed to Mrs. Cathie Bryant for her patience and skill in typing this document.

CHAPTER I

INTRODUCTION

The Kentucky State Department of Education has allocated considerable resources for the planning, development, and implementation of programs in practical arts education (career exploration) in middle/junior high schools throughout the state. This report will reflect the results of a six-month research effort to study this statewide program. Two types of findings were examined in this study. The first section reports on the questionnaire survey relative to practical arts completed by a sample of teachers, counselors, students, and principals from twenty Kentucky schools who were involved with ongoing practical arts programs during the 1976-77 school year.

The second section of the report involves examination of the results of two administrations of an instrument developed by the American College Testing Program entitled the Assessment of Career Development (ACD). In 1975, as part of a statewide testing program, this instrument was included in a battery of tests which were administered to students in voluntarily participating schools across the Commonwealth. In the latter part of that school year students involved in practical arts programs then were readministered the ACD.

Examination of the findings from these two data sets reflects the impact of practical arts education upon students in various programs across the state. This report will focus upon report findings regarding the effectiveness of practical arts education to date and examine various specific components which may contribute to program success. Various programmatic aspects will be examined in order to provide decision makers at both the state and local level with information which may be utilized for future personnel training, program implementation and refinement.

NEED FOR THE STUDY

Since its inception in 1972, the Kentucky Practical Arts Education Program has become increasingly integrated into school curriculum planning across the state, involving more educators, schools and students each year. Since practical arts education in Kentucky is a relatively young program, up to this time most emphasis has been placed upon program development and implementation. In order to evaluate the effectiveness of the program to date, a need exists for the collection of empirical data from persons involved at the operational level.

OBJECTIVE OF THE STUDY

The objective of this study is to provide decision makers at the state and local level with empirical data for purposes of evaluating, enhancing, and strengthening practical arts education programs in the Commonwealth of Kentucky.

DEFINITION OF TERMS

ACD - Abbreviation for the Assessment for Career Development which was the ACT (American College Testing) instrument utilized in both the statewide and practical arts program test administration. It is designed to measure three components of career development: occupational awareness, self awareness, and career planning and decision making.

Practical Arts - An educational program designed to broaden the experience of middle/junior high school students by providing them with an opportunity to explore a diversity of career roles in order that they may be better prepared to make decisions on their personal needs and future career goals. A practical arts program offers classes which are developed around and consistent with the occupational cluster concept.[1]

CCVTE - The abbreviation for the Center for Career and Vocational Teacher Education, Western Kentucky University.

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[1]Karen Travis, An Experimental Study to Determine the Impact of Career Maturity and Attitudes Toward School of Junior High Students in Bullitt County. Final Report to the Kentucky Bureau of Vocational Education, Frankfort, Kentucky, June, 1976 (Shepherdsville High School, 1976), p. 7, quoting Practical Arts Unit, Bureau of Vocational Education, Kentucky State Department of Education, Frankfort, Kentucky.

CHAPTER II

RESEARCH METHODS, PROCEDURES, AND FINDINGS RELATIVE TO SURVEY DATA

Introduction

Two phases of methodology and procedures were utilized in this study. The purpose of the first phase, the survey aspect of the study, was to poll educators and students involved with practical arts programs across the state regarding attitudes toward various aspects of the program. This involved three major activities: (1) questionnaire development; (2) data collection; and (3) data analysis. This chapter will report the methods and procedures utilized in this phase plus findings, conclusions, and recommendations.

The second phase of this study involved an ex post facto analysis of findings relative to results of administration of the Assessment of Career Development instrument. Findings and conclusions resulting from analysis of these data are presented in Chapter III.

Delimitations and Limitations of the Study

This study was delimited to twenty schools across Kentucky having ninth grade classes which receive funding for practical arts programs. Survey data were obtained from a principal, counselor, practical arts teacher and one ninth grade practical arts class at each school. The rationale for polling ninth graders was based on the assumption that the majority of these students would have had at least one year of practical arts education. In reality, however, this was not always the case, as several schools in the sample had just implemented practical arts education during the 1976-77 school year. The reader should be alerted to the fact that several of the programs were first-year programs and should give this factor due consideration when examining the findings of this study.

There were no instruments available to assess the particular aspects of practical arts programs required for this study. The instruments developed for this study were not subjected to rigorous testing for reliability and validity. The constraints of time and finances prevented the complete development of instruments; however, they were adequate and appropriate.

Sample Selection

Schools

This study was concerned with evaluating the impact of practical arts education programs at a statewide level. The Practical Arts Unit of the State Department of Education subsidized sixty-five practical arts programs across the state during the 1976-77 school year. It was necessary to identify those schools with practical arts programs and then delimit the population to those schools having ninth grade programs.

Utilizing a computer program for random sampling, a sample of 20 schools was drawn from the delimited list of 43. Each school was checked in the 1977 Counselor Education Directory to ensure that a counselor was employed at each sample school. Nineteen schools in the initial sample were listed as having counselors. The one without a counselor was eliminated, and another school was randomly selected.

Personnel

The study involved gathering data from a random sample of persons involved with practical arts programs at the operational level. Data were obtained from the following sample groups:

1. One practical arts teacher from each of the twenty sample schools. (The teacher was identified as teaching at least one ninth grade section of practical arts classes.)
2. The principal at each of the sample schools.
3. One ninth grade class of practical arts students from each of the twenty participating schools. (Total student N-size was 458.)
4. One guidance counselor from each of the twenty participating schools.

Instrument Development

Four different survey instruments were developed as part of this study--student, administrator, teacher, and counselor (See Appendices A, B, C and D). Each was directed to that respective person in terms of their personal perceptions of the practical arts program at that respective school. All four instruments shared common items and items unique to the respondent's role in the practical arts program. Instruments were color coded by group for ease of identification.

The educator and student instruments were developed to measure essentially the same factors from four different perspectives. Attitudes relative to six major areas of the practical arts program were surveyed. These major areas are listed as follows:

a. Materials, Supplies, and Equipment
b. Career and Curriculum Guidance
c. Practical Arts Training
d. Support in Program Development and/or Implementation
e. Program Effectiveness and Acceptance
f. Impact of Program Upon Students

It should be reiterated here that all items on all four instruments were directed toward measuring each respondent's attitude or perception toward the different aspects of his or her school's practical arts program, and not toward the overall state practical arts program.

Practical Arts Educator Surveys

The three educator instruments were developed simultaneously and shall be referred to as "practical arts educator surveys" for the remainder of this report.

The practical arts educator surveys were developed according to a singular format with adaptations made according to unique respondents' roles in the practical arts program. There was some variation in the format but most of the items were designed to measure the same areas as perceived by the respondents in their varying roles.

The practical arts educator surveys contained three sections which measured the following aspects of the school's practical arts program:

1. Programmatic aspects were rated as to quality and quantity.
2. The degree of support provided by various school, community, and state resources was obtained.
3. Attitudes toward the school practical arts program and student benefits derived from the program were assessed.

Items for these three sections were developed from an item pool formed from a variety of sources to include a study by Newton (2)

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[2]Mark Newton, Research Related to the Regional Career Education Development Project. Final Report to the Kentucky Bureau of Vocational Education, Frankfort, Kentucky, July, 1974 (Western Kentucky University, 1974).

the practical arts curriculum guide in Kentucky (3), and items generated by faculty from Bowling Green Junior High School. Faculty members at the junior high school were asked to list five positive statements plus five negative statements regarding their practical arts programs. When necessary, items were rewritten to avoid ambiguity, and items expressing similar opinions were rewritten into one statement for the sake of brevity and to avoid redundancy. All four questionnaires were developed and submitted for numerous critiques and revision recommendations to CCVTE staff members knowledgeable in the area of practical arts education, and several critiques were given by research specialists from the Office of Educational Research. Recommended revisions were made after each critique until a final group of questionnaires was developed which received approval from both participating CCVTE readers and readers in the Office of Educational Research. A representative of the Bureau of Vocational Education also reviewed the instruments in their finalized form.

The educator survey instruments contained three major sections. The first section, which measured attitudes relative to MATERIAL, SUPPLIES, AND EQUIPMENT, CAREER AND CURRICULUM GUIDANCE, AND TEACHER TRAINING, consisted of two five-point scales ("Excellent" - "Poor"; "Adequate - Inadequate."). A value of five was assigned to an "Excellent" and "Adequate" rating and then descended in value to a one for a "Poor" and "Inadequate" rating.

The second major section of the educator survey instruments was designed to measure SUPPORT IN PROGRAM DEVELOPMENT AND/OR IMPLEMENTATION. This information was also measured by a five-point scale, ranging in value from 5--"Substantial Support" to 1--"No Support." (This section, as explained earlier, was not included in the student survey. Therefore, only findings from the educators' surveys are reported.)

The third major section utilized seven-point Likert type rating scales as the response set in measuring attitudes relative to PROGRAM EFFECTIVENESS AND ACCEPTANCE and IMPACT OF PROGRAM UPON STUDENTS. These type scales were utilized in order to allow for a wide range of expression from respondents, and ranged from "Strongly Agree" to "Strongly Disagree."

A survey instrument was developed for each type of professional educator involved in this study: teacher, administrator, and counselor. The teacher, principal, and counselor questionnaires sought to answer the following questions of each sample group as it related to the respondent's particular practical arts program.

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[3]State Department of Education, Bureau of Vocational Education. Practical Arts Education: Program Guidelines for Local School Districts (Frankfort, Kentucky, 1976).

1. What are the characteristics of the teachers, counselors, and principals involved in this study?

2. How much practical arts education training (preservice, inservice, and workshop) has been available, and what was the quality of this training?

3. What is the quality of practical arts teaching resources, and is there a sufficient quantity?

4. In program coordination and implementation what degree of assistance has been provided by school, community, and state resource persons?

5. What is the extent of vocational interest and/or ability testing, and what are its applications in planning student coursework and providing career guidance?

6. What is the quality of career information available for students, and is there a sufficient quantity?

7. What is the quality and quantity of time available for teachers and/or counselors to assist students with career and coursework problems or questions?

8. What is the attitude of parents relative to the practical arts program?

9. What is the attitude of community resource persons relative to student visitations?

10. Is practical arts education appropriate for students of this age-level?

11. Are practical arts course offerings reflective of student interests?

12. Are practical arts classes challenging to students?

13. What is the perceived degree of overall effectiveness of the practical arts teachers?

14. Is the occupational cluster an effective mode of teaching practical arts?

15. What are the attitudes toward joint responsibility of counselors and teachers in the career guidance of students?

16. What is the overall faculty attitude toward the school practical arts program?

17. What is the attitude toward needing additional workshop/inservice experience in practical arts?

18. In what areas does the practical arts program benefit students?

Practical Arts Student Questionnaire

Two important attributes were considered requisite in the development of the student instruments. The first consideration was to ensure a proper reading level for ninth grade students to be utilized in the questionnaire wording. The second requisite was to ensure brevity of questionnaire completion time, both for ease of student utilization and for minimal disruption of class routine. Format of the student questionnaire was similar in construction to the educator survey instruments.

However, the section of the student questionnaire which polled quality and quantity of MATERIALS, SUPPLIES AND EQUIPMENT and CAREER AND CURRICULUM GUIDANCE varied somewhat in construction from the educators' survey instruments and will be examined separately. Student scores were based upon two scales. A four-point scale ("How good is it?") for measuring quality, with an additional section for reporting non-availability, plus a "yes-no" scale ("Do you need more?") for reporting quantity was utilized. The four-point scale ranged in value from "Excellent" to "Poor." Percentages of responses to the "Yes-No" scale were calculated. The sections of the questionnaires which measured PROGRAM EFFECTIVENESS AND ACCEPTANCE and IMPACT OF PROGRAM UPON STUDENTS were identical in format to the educators' survey instruments. Findings from these areas will be contrasted across the four groups.

Thirteen aspects of the school practical arts program were measured by both the practical arts educator surveys and the student survey. Two additional items were added to measure other student perspectives of the program. The following questions as they related to the particular school program were the major areas covered by the student questionnaire:

1. What is the quality of practical arts education equipment, and is there need for more?

2. What is the quality of practical arts education supplies and materials, and is there need for more?

3. What is the quality of vocational interest and ability testing, and is there need for more?

4. What is the quality of career information available, and is there need for more?

5. What is the quality of counselor assistance for career and coursework questions, and is there a need for more?

6. What is the quality of teacher assistance for career and coursework assistance, and is there a need for more?

7. What are the perceived attitudes of parents relative to the practical arts program?

8. What are the perceived attitudes of community resource persons relative to student visitations?

9. Are practical arts programs appropriate for this age level student?

10. Are the practical arts program offerings reflective of student interests?

11. Is the practical arts program challenging to students?

12. Is the practical arts teacher an effective one?

*13. Does the practical arts teacher seem knowledgeable in the area being taught?

*14. Is there adequate time allocation for the occupational cluster being studied?

15. What are the perceived student benefits from practical arts classes?

* These were the two additional questions not included in the educator questionnaires

Administration of Instruments

Dissemination

Prior to the dissemination of questionnaires, the superintendent of each of the twenty sample schools was contacted by the State Practical Arts Unit. The purpose of the study was explained, and permission to involve each of the schools was obtained.

The State Practical Arts Unit also drafted a cover letter soliciting the support of the twenty principals chosen in the sample. This cover letter was included in each of the questionnaire packets distributed to the twenty schools. A copy of the letter was mailed to the superintendent of each respective school (See Appendix E).

The principal of each school was contacted by telephone to solicit support for the project and to identify the counselor and teacher who would be participating in the survey. Teachers were randomly selected prior to the telephone contact with the principal and only verification of the participants was needed. Appointments for school visits to disseminate instruments were also made at this time.

A date for school visitation and instrument dissemination was also set with the principal at this time.

To ensure understanding by participants, a cover letter for the principal and teacher at each school was drafted, explaining the purpose and scope of the study and outlining specific procedures for questionnaire dissemination and completion (See Appendices F and G). A return date for questionnaire packets was included in the letter. Each school and participants were pledged anonymity by the researcher. It was felt that this would aid in alleviating any threat to honesty of response. Since the data were to be reported in statewide summary form, it was not necessary to report the names of participating schools or individuals. To personalize the correspondence (which the researcher felt would promote a higher return rate), each letter was individually typed, using the participants' names and the name of the school. An instruction sheet to be utilized in administering student questionnaires was provided each teacher (See Appendix H). An envelope was attached to each of the questionnaires prior to packet compilation. Instructions directed that each respondent, upon completion of his/her questionnaire, would fold it and seal it in the provided envelope. Instruments, directions, and cover letters were compiled into a packet for each school.

Questionnaire packets were personally disseminated to each of the participating schools. The project was further discussed with the school principals at this time, and any questions pertaining to the project were answered. A packet with prepaid postage was left at the schools for return of the completed questionnaires. (One exception to this procedure occurred. During the dissemination period, heavy flooding occurred in the eastern part of the state which prohibited contact with the principal of one school. This principal was contacted by phone the following week, and the questionnaire packet was subsequently mailed to that school.)

Population

Twenty schools from seventeen different Kentucky counties returned practical arts survey packets. The average enrollment of participating

schools was 789, ranging from enrollments of 425 to 1452. Two schools did not provide enrollment figures. Eight of the sample schools were middle/junior high schools, and twelve were high schools. The return rate for all questionnaire packets was 100 percent. Participants at all twenty schools completed and returned all materials which had been disseminated.

Eleven of the participating teachers were male, and nine were female. Seven teachers taught practical arts classes in one occupational cluster, and thirteen teachers taught in more than one occupational cluster, the average number of clusters being taught being 3.35 with a range of from 1 to 13. The average number of years' teaching experience of the participating teachers was 10, with a range from 0 (first-year teacher) to 29. The average number of years' experience in teaching practical arts was 1.85, with a range of 0 - 5. The average number of years of non-teaching work experience reported was 2.95, with a range of from 0 to 12 (See Table 1).

Table 1

Demographic Information on Teachers
Participating in Practical Arts Survey

Number of Males	Number of Females		$\bar{X}$	SD	Range	N
11	9	Number of Practical Arts Classes Taught	3.35	3.20	1-13	20
		Number of Years Teaching Experience	10.00	7.50	0-29	20
		Number of Years Practical Arts Teaching Experience	1.85	1.35	0-5	20
		Number of Years Non-Teaching Work Experience	2.95	4.05	0-12	20

Twenty counselors completed and returned practical arts surveys. Six of the participating counselors were male, and fourteen were female. The average number of years' school guidance experience reported for these counselors was 7.80, with a range of from two to eighteen years' experience. A minimal amount of practical arts teaching experience was reported by participating counselors, the average number of years' experience being reported as .10, with a range of 0 to 1. The average number of years' teaching experience reported by the counselors was

7.50, with a range of from two to eighteen years. The average number of years' non-teaching work experience reported by the counselors was 4, with a range of from one to fifteen years. (See Table 2.)

Table 2

Demographic Information on Counselors Participating in Practical Arts Survey

Number of Males	Number of Females		$\bar{X}$	SD	Range	N
6	14	Number of Years School Guidance Experience	7.80	5.01	2-18	20
		Number of Years Teaching Experience	7.50	5.12	2-18	20
		Number of Years Experience Teaching Practical Arts	0.10	0.31	0-1	20
		Number of Years Non-Teaching Work Experience	4.00	3.59	1-15	15

Twenty principals completed and returned questionnaires, with eighteen of these principals being male and two being female. The average number years' administrative experience reported for the principals was 9.60 with a range of from three to thirty years. The average number of years of teaching experience for the principals was 10.50 with a range of from three to forty years. None of the principals surveyed reported any experience in teaching practical arts. The average number of years' non-teaching work experience reported by the principals was 5.30 with a range of from zero to fifteen years. (See Table 3.)

Twenty ninth grade practical arts classes (one from each school) completed and returned questionnaires, the total number of responding students being 458. The mean age of the students was 14.58 with a standard deviation of .94 and an age range of 12 to 18. Eighty percent of the students were within the 14 to 15 age range.

At the twenty schools surveyed, principals reported that practical arts classes were mandatory for all students at five schools and elective at fifteen schools. The average number of occupational clusters offered at the sample schools was 8.5 with a range from 1 to 13. The total number of offered occupational clusters for all schools is shown in Table 4.

Table 3

Demographic Information on Principals Participating in Practical Arts Survey

Number of Males	Number of Females		$\bar{X}$	SD	Range	N
18	2	Number of Years Non-Teaching Work Experience	5.30	3.66	0-15	20
		Number of Years Teaching Experience	10.50	9.29	3-40	20
		Number of Years Practical Arts Teaching Experience	0	0	0	20
		Number of Years Administrative Experience	9.60	7.10	3-30	20

Table 4

Total Occupational Clusters Offered at Schools Surveyed

Title of Cluster	Number of Schools Offering Clusters
Agribusiness, Natural Resources and Environmental Occupations	13
Business and Office Occupations	17
Communications and Media Occupations	13
Construction Occupations	16
Consumer and Home Economics Occupations	19
Fine Arts and Humanities Occupations	13
Health Occupations	15
Manufacturing Occupations	11
Marketing and Distribution Occupations	12
Public and Personal Service Occupations	9
Recreation and Hospitality Occupations	11
Transportation Occupations	10
Me, Money, and Careers	12

The average size of the practical arts classes surveyed (as reported by teachers) was 22.9 with a range from 11 to 30. Teachers were asked for their opinions regarding the size of their classes. Eight teachers felt that their practical arts classes were too large, while twelve felt that their class enrollments were the appropriate size. None felt that their classes were too small.

Teachers were asked to respond to questions related to their students' family income and the general academic ability of their students. The responses indicated that most classes were composed of a cross-section of incomes (13 classes) and a cross-section of academic ability (14 classes). Five classes were composed of predominantly low family income students, and two classes were reported as predominantly high and/or middle income students. Teachers reported three classes composed of low academic ability students and three classes of average to high academic ability.

Teachers were also asked to report the time allocation for the clusters taught in each of the surveyed classes. Five teachers reported the time allocation to be in a range of from 3 to 6 weeks, nine teachers reported a time allocation range of from 7 to 18 weeks, and six teachers reported their time allocation range to be from 19 to 36 weeks.

Analysis of Findings

Statewide means and standard deviations for each of the four data sets were calculated by standard computer programs. Attitudes of the four statewide groups will be reported and contrasted in this section of the report.

It should be noted here that, on instruments of this type, scores tend to fall within the middle range of the scales. It is interesting to note that when examining the scores for this study, although this tendency did occur, the scores, as a general rule, tended toward the positive, or stronger, end of all the scales. The researcher interpreted this as an indication of a trend of an overall positive attitude toward the program as reflected by the respondents' mean scores.

Materials, Supplies and Equipment

The teachers surveyed in the study rated the QUALITY and QUANTITY of MATERIALS AND SUPPLIES used in practical arts classes at their school as 3.50 and 3.16, respectively. (It should be reiterated here that all the educator survey instruments utilized a five-point scale.) Principals rated the QUALITY of their school's MATERIALS AND SUPPLIES somewhat higher at 3.70, and the QUANTITY of these was rated the same

as the teachers, 3.16. Practical arts MATERIALS AND SUPPLIES received the highest rating on the educators' surveys from the counselors, who rated this program aspect at 3.89 for QUALITY and 3.37 for QUANTITY. (See Table 5.)

Table 5

Means and Standard Deviations of Educator Responses* to Survey Items Relative to Quality and Quantity of Practical Arts Materials, Supplies, and Equipment

Program Aspect	Counselor	Teacher	Principal
Quality of Materials and Supplies	$\bar{X}$ = 3.89 SD = .66 N = 19	$\bar{X}$ = 3.50 SD = 1.23 N = 20	$\bar{X}$ = 3.70 SD = 1.08 N = 20
Quantity of Materials and Supplies	$\bar{X}$ = 3.37 SD = 1.01 N = 19	$\bar{X}$ = 3.16 SD = 1.07 N = 19	$\bar{X}$ = 3.16 SD = 1.17 N = 19
Quality of Equipment	$\bar{X}$ = 3.58 SD = .77 N = 19	$\bar{X}$ = 3.25 SD = 1.21 N = 20	$\bar{X}$ = 3.75 SD = .79 N = 20
Quantity of Equipment	$\bar{X}$ = 3.15 SD = .99 N = 20	$\bar{X}$ = 3.00 SD = 1.05 N = 19	$\bar{X}$ = 3.10 SD = .87 N = 19

*Five-point rating scale (5=Excellent; 1=Poor)

The student survey, which utilized a four-point rating scale, revealed that students statewide rated QUALITY of practical arts MATERIALS AND SUPPLIES available in their classes at 2.69; 63 percent revealed that MORE MATERIALS AND SUPPLIES were needed in their classroom, while 37 percent indicated that NO ADDITIONAL MATERIALS AND SUPPLIES were needed. (See Table 6.)

The QUALITY AND QUANTITY OF EQUIPMENT utilized in practical arts classes was rated as 3.25 and 3.00, respectively, by practical arts teachers. This program aspect was rated higher on QUALITY by both counselors and principals--counselors rating QUALITY at 3.58, and principals at 3.75. QUANTITY OF PRACTICAL ARTS EQUIPMENT was also rated somewhat higher by counselors and principals, at 3.15 and 3.10, respectively. (See Table 5.)

Table 6

Means and Standard Deviations of Student Responses* to Survey Items Relative to Quality and Quantity of Practical Arts Materials, Supplies, and Equipment

Program Aspect	
Quality of Materials and Supplies (How Good is It?")	$\bar{X}$ = 2.69 SD = .76 N = 453
Quantity of Materials and Supplies (Do you need more?)	% Yes = 62.8 % No = 37.2 N = 438
Quality of Equipment (How good is it?)	$\bar{X}$ = 2.65 SD = .85 N = 452
Quantity of Equipment (Do you need more?")	% Yes = 64.7 % No = 35.3 N = 426

*Four-point rating scale (4=Excellent; 1=Poor)

Students (utilizing a four-point scale) rated the QUALITY OF EQUIPMENT available for their practical arts classes as 2.65. Sixty-five percent indicated that MORE EQUIPMENT was needed at their school, while 35 percent indicated NO ADDITIONAL EQUIPMENT was needed. (See Table 6.)

Career and Curriculum Guidance

The quality and quantity of four different aspects of career and curriculum guidance were polled in the study--career information materials available, vocational interest testing, vocational ability testing, and assistance of students with career and curriculum guidance. Results of data are shown in Tables 7 and 8.

Teachers rated the QUALITY AND QUANTITY OF CAREER INFORMATION AVAILABLE FOR STUDENTS rather high at 4.20 and 4.00 respectively. Principals rated this program aspect even slightly higher, at 4.25 and at 4.05 for QUALITY and QUANTITY respectively. Counselors rated this aspect slightly lower than the teachers and principals, yielding scores of 4.00 and 3.85 for CAREER INFORMATION QUALITY AND QUANTITY respectively.

On a four-point scale, students rated the QUALITY OF CAREER INFORMATION available to them at 2.50. Seventy-two percent indicated they felt MORE WAS NEEDED, while twenty-eight percent indicated that ADDITIONAL CAREER INFORMATION was not needed.

The QUALITY AND QUANTITY OF VOCATIONAL INTEREST TESTING OF STUDENTS was rated by teachers at 3.45 and 3.20 respectively. Principals rated this guidance aspect slightly higher, with average scores of 3.75 for QUALITY and 3.55 for QUANTITY. Counselors rated this aspect somewhat higher than teachers but lower than principals, rating both QUALITY AND QUANTITY OF VOCATIONAL INTEREST TESTING at 3.65.

Students rating of QUALITY OF VOCATIONAL INTEREST TESTING at their school resulted in a mean score of 2.49, utilizing a four-point scale. Sixty-five percent of the students responding to whether MORE VOCATIONAL INTEREST TESTING WAS NEEDED at their schools answered positively, while thirty-five percent indicated NO MORE WAS NEEDED.

VOCATIONAL ABILITY TESTING OF STUDENTS was also polled. Teachers rated the QUALITY of this program aspect at 3.35; QUANTITY was rated as 3.05. Principals rated VOCATIONAL ABILITY TESTING somewhat higher, yielding 3.65 for QUALITY and 3.50 for QUANTITY. Counselors rated this program aspect the highest of the educators surveyed, rating QUALITY of ability testing at 3.80 and QUANTITY at 3.55.

On a four-point scale, students rated the QUALITY OF THEIR VOCATIONAL ABILITY TESTING at 2.54, and 59% reported they needed MORE VOCATIONAL ABILITY TESTING. Forty-one percent indicated they felt NO ADDITIONAL ABILITY TESTING was needed.

The QUALITY AND QUANTITY OF ASSISTANCE OF STUDENTS WITH CAREER AND CURRICULUM GUIDANCE was another programmatic aspect surveyed. The lowest scores on this program aspect were yielded by the teachers, scoring QUALITY and QUANTITY at 3.74 and 3.50, respectively. Principals scored this program aspect highest of the educators surveyed, but counselor scores were only slightly lower. Principal scores yielded ratings of 4.25 and 4.16 for QUALITY and QUANTITY, respectively. Counselors scored QUALITY of guidance at 4.15 and QUANTITY at 3.95.

Students surveyed yielded a rating of 2.66 (on a four-point scale) for QUALITY OF TEACHER ASSISTANCE FOR QUESTIONS RELATIVE TO COURSES AND CAREERS, while QUALITY OF COUNSELOR ASSISTANCE was rated slightly lower at 2.52. Student responses indicated that 59% wanted MORE HELP FROM TEACHERS and 64% wanted MORE ASSISTANCE FROM COUNSELORS, while 40% felt NO ADDITIONAL TEACHER HELP WAS NEEDED, and 35% felt NO ADDITIONAL COUNSELOR HELP WAS NEEDED.

In a separate section of the educator questionnaires, counselors, principals, and teachers responded (on a seven-point Likert scale) to two attitudinal items relevant to career and curriculum guidance. (See Table 9.) Answers could range from Strongly Agree (7 points) to Strongly Disagree (1 point). The first statement relative to career guidance was "VOCATIONAL INTEREST AND/OR ABILITY TESTS ARE AN INTEGRAL PART OF STUDENT CAREER AND CURRICULUM GUIDANCE AT THIS SCHOOL."

Table 7

Means and Standard Deviations of Educator Responses* to Survey Items Relative to Quality and Quantity of Career Information Available to Students, Testing of Students For Vocational Interests and Abilities, and Assistance of Students With Career and Curriculum Guidance

Program Aspect	Counselor	Teacher	Principal
Quality of Career Information Available to Students	$\bar{X}$ = 4.00 SD = .97 N = 20	$\bar{X}$ = 4.20 SD = .83 N = 20	$\bar{X}$ = 4.25 SD = .72 N = 20
Quantity of Career Information Available to Students	$\bar{X}$ = 3.85 SD = .93 N = 20	$\bar{X}$ = 4.00 SD = .91 N = 18	$\bar{X}$ = 4.05 SD = .83 N = 20
Quality of Testing of Students For Vocational Interests	$\bar{X}$ = 3.65 SD = 1.27 N = 20	$\bar{X}$ = 3.45 SD = 1.32 N = 20	$\bar{X}$ = 3.75 SD = 1.02 N = 20
Quantity of Testing of Students For Vocational Interests	$\bar{X}$ = 3.65 SD = 1.27 N = 20	$\bar{X}$ = 3.21 SD = 1.47 N = 19	$\bar{X}$ = 3.55 SD = 1.10 N = 20
Quality of Testing of Students For Vocational Ability	$\bar{X}$ = 3.80 SD = 1.20 N = 20	$\bar{X}$ = 3.35 SD = 1.18 N = 20	$\bar{X}$ = 3.65 SD = 1.14 N = 20
Quantity of Testing of Students For Vocational Ability	$\bar{X}$ = 3.55 SD = 1.32 N = 20	$\bar{X}$ = 3.05 SD = 1.35 N = 19	$\bar{X}$ = 3.50 SD = 1.28 N = 20
Quality of Assistance with Career and Curriculum Guidance	$\bar{X}$ = 4.15 SD = .67 N = 20	$\bar{X}$ = 3.74 SD = .81 N = 19	$\bar{X}$ = 4.25 SD = .79 N = 20
Quantity of Assistance with Career and Curriculum Guidance	$\bar{X}$ = 3.95 SD = .89 N = 20	$\bar{X}$ = 3.50 SD = .86 N = 18	$\bar{X}$ = 4.17 SD = .79 N = 18

*Five-point rating scale (5=Excellent; 1=Poor)

Table 8

Means and Standard Deviations of Student Responses* to Survey Items Relative to Quality and Quantity of Career Information, Testing of Students For Vocational Interests and Abilities, and Counselor and Teacher Assistance of Students with Career and Curriculum Guidance

Program Aspect	Quality (Measured on a Four-Point Scale)	Quantity Do you need more? Yes or No
Reading Materials Available About Career Information	$\bar{X}$ = 2.54 SD = .95 N = 452	Yes 71.6 No 28.4 N = 423
Testing For Vocational Interests	$\bar{X}$ = 2.49 SD = .86 N = 443	Yes 64.7 No 35.3 N = 417
Testing For Vocational Ability	$\bar{X}$ = 2.54 SD = .82 N = 448	Yes 59.4 No 40.6 N = 419
Counseling Help for Questions About Courses and Careers	$\bar{X}$ = 2.52 SD = .92 N = 443	Yes 64.3 No 35.7 N = 417
Teacher Help for Questions About Courses and Careers	$\bar{X}$ = 2.67 SD = .90 N = 453	Yes 59.7 No 40.3 N = 422

*Four-point rating scale (4=Excellent; 1=Poor)

Counselors and principals agreed most strongly with this statement, average responses being 6.00 and 6.15, respectively. Teachers' attitudes differed rather markedly on this aspect, with an average score result of 4.94. The researcher feels that this discrepancy may be due, at least in part, to counselors and principals being more actively involved in the schools' testing program and therefore being more familiar with the extent of its scope. A lack of dissemination or accessibility of test results to teachers may also be indicated.

The second attitude polled relative to career guidance in the sample schools was stated as follows: "CAREER GUIDANCE IS THE JOINT RESPONSIBILITY OF THE COUNSELOR(S) AND TEACHERS AT THIS SCHOOL." Again, these attitudes were indicated on a seven-point scale. Attitudes of all educators indicated rather strong agreement with this statement, the average responses of the respondents resulting as follows: teachers, 6.05; counselors, 6.50; and principals, 6.30.

Table 9

Means and Standard Deviations of Educator Responses* to Attitudinal Items Relative to Responsibility for Career Guidance and Importance of Vocational Interests and/or Ability Testing

Items	Counselor Ranking	Teacher Ranking	Principal Ranking
Vocational interest and/or ability tests are an integral part of student career and curriculum guidance at this school.	$\bar{X}$ = 6.00 SD = 1.41 N = 20	$\bar{X}$ = 4.94 SD = 2.13 N = 18	$\bar{X}$ = 6.15 SD = .93 N = 20
Career guidance is the joint responsibility of the counselors and the teachers at this school.	$\bar{X}$ = 6.50 SD = .61 N = 20	$\bar{X}$ = 6.05 SD = 1.43 N = 18	$\bar{X}$ = 6.30 SD = .73 N = 20

*Seven-point rating scale (7=Strongly Agree; 1=Strongly Disagree)

Practical Arts Training

Educator attitudes toward the QUALITY AND QUANTITY OF PRACTICAL ARTS PRESERVICE AND INSERVICE AND/OR WORKSHOP TRAINING was also surveyed (See Table 10). Teachers rated the QUALITY and QUANTITY of their PRESERVICE TRAINING as 3.55 and 3.29, respectively. Principals rated the QUALITY slightly lower, at 3.53, and the QUANTITY as higher, 3.36. Counselors rated both aspects higher than either principals or teachers, giving QUALITY OF PRESERVICE TRAINING a 3.75 rating and QUANTITY a 3.65 rating.

Counselors also rated QUALITY AND QUANTITY OF INSERVICE AND/OR WORKSHOP TRAINING higher than the other two educator groups. QUALITY OF INSERVICE AND/OR WORKSHOP TRAINING was rated at 3.79 by counselors. This group also rated QUANTITY OF INSERVICE AND/OR WORKSHOP TRAINING as 3.47. Teacher ratings were slightly lower, with ratings of 3.74 and 3.28 for QUALITY and QUANTITY, respectively. Principals rated this area the lowest of the three groups, giving QUALITY OF INSERVICE/WORKSHOP EXPERIENCE a 3.60, and QUANTITY a rating of 3.32.

On a separate section of the educators' questionnaires, respondents were asked to indicate their opinions (on a seven-point scale) to the following statement also relative to practical arts training: "PERIODIC INSERVICE AND/OR WORKSHOP TRAINING IN PRACTICAL ARTS IS IMPORTANT IN THE MAINTENANCE OF MY PROFESSIONAL COMPETENCY." (Principal's questionnaire differed slightly in wording--"in the maintenance of a professionally competent staff.") Principals and counselors both agreed quite strongly with this statement, and their average scores were identical at 6.65. Teachers' agreement with this statement was also relatively strong, with a mean score of 6.21. (See Table 11.)

Table 10

Means and Standard Deviations of Educator Responses* to Survey Items Relative to Preservice and Inservice Training for Practical Arts Personnel and Administrators

Program Aspect	Counselor	Teacher	Principal
Quality of Preservice Training	$\bar{X}$ = 3.75 SD = .97 N = 20	$\bar{X}$ = 3.55 SD = 1.23 N = 20	$\bar{X}$ = 3.53 SD = 1.17 N = 19
Quantity of Preservice Training	$\bar{X}$ = 3.65 SD = 1.09 N = 20	$\bar{X}$ = 3.29 SD = .99 N = 17	$\bar{X}$ = 3.36 SD = 1.26 N = 19
Quality of Inservice/Workshop Training	$\bar{X}$ = 3.79 SD = 1.08 N = 19	$\bar{X}$ = 3.74 SD = .99 N = 19	$\bar{X}$ = 3.60 SD = 1.27 N = 20
Quantity of Inservice/Workshop Training	$\bar{X}$ = 3.47 SD = 1.47 N = 19	$\bar{X}$ = 3.28 SD = 1.02 N = 18	$\bar{X}$ = 3.32 SD = 1.25 N = 19

*Five-point rating scale (5=Excellent; 1=Poor)

Table 11

Means and Standard Deviations of Educator Responses* to An Attitudinal Survey Item Relative to Periodic Inservice and/or Workshop Training in Practical Arts As An Important Aspect in the Maintenance of a Professional Competence

Respondents	$\bar{X}$	SD	N-Size
Counselor Ranking	6.65	.49	20
Teacher Ranking	6.21	1.27	19
Principal Ranking	6.65	.49	20

*Seven-point rating scale (7=Strongly Agree; 1=Strongly Disagree)

Support in Program Development and/or Implementation

In Section III of the educator survey instruments, respondents were asked to rate the DEGREE OF SUPPORT (on a five-point scale) of various school, community, and state personnel IN THE DEVELOPMENT AND/OR IMPLEMENTATION OF THE PRACTICAL ARTS PROGRAM in their school. The degrees of support provided by nine different persons or groups was polled: principals, guidance counselors, practical arts teachers, other faculty members, parents, community resource persons, high school career education staff, state education personnel, and university faculty. Value of rankings assigned were as follows:

Substantial Support	- 5
Much Support	- 4
Moderate Support	- 3
Minimal Support	- 2
No Support	- 1

The various respondents were not asked to rate themselves. Responses on the section reflected the amount of support, assistance, and/or involvement each person or group provided in program development and/or implementation.

On the above-described scale, both teachers and counselors ranked PRINCIPALS as providing the highest degree of support, ranking principals' support at 4.30 and 4.55, respectively. COUNSELORS were ranked as the strongest providers of support by the principals, at 4.45, and teachers gave COUNSELORS their second highest ranking, at 4.10. PRACTICAL ARTS TEACHERS were ranked by principals as only slightly lower in support than COUNSELORS, at 4.40, and counselors ranked PRACTICAL ARTS TEACHERS as second highest in support, ranking them at 4.45. STATE EDUCATION PERSONNEL received the next highest ranking from both principals and counselors, receiving ratings of 4.10 and 4.00, respectively. Teachers rated STATE EDUCATION PERSONNEL at 3.28, a rank of fifth.

COMMUNITY RESOURCE PERSONS were ranked third in support by teachers, with a mean rating of 3.67, and both principals and teachers rated COMMUNITY RESOURCE PERSONS at 3.90 and 3.85, respectively, for a rank of fourth.

OTHER FACULTY MEMBERS were rated by principals and teachers, at 3.70 and 3.30, respectively. Counselors rated OTHER FACULTY in the same range, at 3.50, but rated their HIGH SCHOOL CAREER EDUCATION STAFFS somewhat higher, at 3.67.

Principals and teachers rated their HIGH SCHOOL CAREER EDUCATION STAFFS at 3.42 and 3.00, respectively. Counselors rated PARENTAL support and support of OTHER FACULTY both at 3.50.

PARENTAL support received the next-to-last rating by both principals and teachers, at 3.25 and 2.95, respectively.

The group providing the least amount of support--UNIVERSITY FACULTY--was reported consistently across all the educator groups. The mean principals' score was 2.45, teachers--2.36, and counselors--2.64.

One principal also reported another source of support, the county board of education, and rated the degree of support at 5.00. One teacher also reported another source of support, the county supervisor, and rated this degree of support at 4.00.

Data for this section are reported in Table 12.

Table 12

Means and Standard Deviations of Educators' Responses to a Five-Point Rating Scale** Measuring Degree of Support Provided in Development and Implementation of Practical Arts Programs

Personnel Rated	Counselors' Ratings	Teachers' Ratings	Principals' Ratings
Principal	$\bar{X}$=4.55 SD=.69 N=20	$\bar{X}$=4.30 SD=.92 N=20	*
Guidance Counselor	*	$\bar{X}$=4.10 SD=1.02 N=20	$\bar{X}$=4.45 SD=.69 N=20
Practical Arts Teachers	$\bar{X}$=4.45 SD=.60 N=20	*	$\bar{X}$=4.40 SD=.68 N=20
Other Faculty Members	$\bar{X}$=3.50 SD=.89 N=20	$\bar{X}$=3.30 SD=1.74 N=20	$\bar{X}$=3.70 SD=.80 N=20
Parents	$\bar{X}$=3.50 SD=.83 N=20	$\bar{X}$=2.95 SD=1.10 N=20	$\bar{X}$=3.25 SD=.91 N=20
Community Resource Persons	$\bar{X}$=3.85 SD=.87 N=20	$\bar{X}$=3.67 SD=.97 N=18	$\bar{X}$=3.90 SD=1.02 N=20
High School Career Ed. Staff	$\bar{X}$=3.67 SD=1.17 N=15	$\bar{X}$=3.00 SD=1.33 N=18	$\bar{X}$=3.42 SD=1.07 N=19
State Education Personnel	$\bar{X}$=4.00 SD=1.08 N=20	$\bar{X}$=3.28 SD=1.13 N=18	$\bar{X}$=4.10 SD=.91 N=20
University Faculty	$\bar{X}$=2.64 SD=1.34 N=20	$\bar{X}$=2.36 SD=1.45 N=14	$\bar{X}$=2.45 SD=1.05 N=20

*Not polled on this aspect

**(5=Substantial Support; 1=No Support)

Program Effectiveness and Acceptance

The effectiveness and acceptance of the practical arts programs in the sample schools were surveyed across all four groups--students, teachers, principals and counselors. Attitudes toward statements regarding various programmatic aspects were indicated on a seven-point Likert attitudinal scale, ranging from 7--"Strongly Agree" to 1--"Strongly Disagree." Some items were negatively stated and will be indicated where they occur in reporting. The educators' instruments each contained thirteen statements measuring attitudes toward program effectiveness and acceptance, and the student instrument contained ten items to poll attitudes in this area. The following areas of program effectiveness and acceptance were surveyed. Those who were surveyed on each aspect are indicated.

Program Area Surveyed	Students	Teachers	Counselors	Principals
Reflective of student interests	X	X	X	X
Challenging to students	X	X	X	X
Attitude toward need for both a practical arts program plus an academic regimen for students	X	X	X	X
Effective teachers	X	X	X	X
Knowledgeable teachers	X	*	*	*
Appropriateness for age group	X	X	X	X
Effectiveness in providing knowledge & exploration of careers	X	X	X	X
Perceived effectiveness of "occupational cluster" mode of teaching	*	X	X	*
Attitude toward sufficient time allocation for class	X	*	*	*
Perceived principal attitudes toward program	*	X	X	*
Perceived practical arts staff attitudes toward program	*	*	X	X
Perceived counselor attitudes toward program	*	X	X	X
Teacher/counselor attitudes toward increased duties relative to practical arts involvement	*	X	X	X
Perceived attitudes of other faculty toward program	*	X	X	X
Perceived attitudes of community resource persons toward program	X	X	X	X
Perceived attitudes of parents toward program	X	X	X	X

X Polled

* Not polled on this area

Principals' attitudes relative to practical arts being REFLECTIVE OF STUDENTS' INTERESTS were the strongest, resulting in a mean score of 5.90. Teachers' and counselors' attitudes were similar on this point, producing mean scores of 5.58 and 5.50, respectively. Students rated this aspect the lowest of the four groups at a mean score of 4.83.

Attitudes toward a negatively phrased statement polling whether subjects covered in practical arts classes are CHALLENGING TO STUDENTS resulted in similar mean scores for all groups. Principals disagreed most strongly with this statement, producing a mean score of 2.45. The counselor mean score was only slightly less negative, at 2.47. Teachers produced slightly a higher mean score of 2.75, and the student mean score was highest, at 2.94. It may be noted here, however, that all scores fell within the "Disagree" ranges.

Attitudes toward the NEED FOR BOTH A PRACTICAL ARTS PROGRAM PLUS AN ACADEMIC REGIMEN FOR STUDENTS was polled across all four groups. These attitudes were polled by measuring responses to a negatively phrased item, "Practical arts classes should be eliminated so that students can have more time for academic subjects." All four groups indicated disagreement with this statement, counselors and teachers the most strongly, both with mean scores of 1.90. Principals and students yielded only slightly higher mean scores, at 2.15 and 2.33, respectively.

Principals ranked TEACHING EFFECTIVENESS of their practical arts staff the highest of the four groups, producing a mean score of 6.40. Counselors produced the second highest mean score on this aspect--6.30. Students ranked teachers slightly lower, at 5.74, and teachers ranked themselves the lowest of the four groups, at 5.70.

Students only were polled on practical arts TEACHER KNOWLEDGE OF SUBJECT MATTER. The student rating produced a mean score of 5.87, the highest mean score on any area of the student data.

Another area of program effectiveness polled was practical arts' classes being APPROPRIATE FOR THIS AGE STUDENT. All groups indicated rather strong agreement on this point, counselors, principals and teachers producing mean scores of 6.60, 6.50, and 6.35, respectively. The student attitude statement, which was negatively phrased, yielded a mean score of 1.85.

A general statement relative to whether practical arts classes are EFFECTIVE IN PROVIDING STUDENTS WITH AN EXPLORATION OF CAREERS yielded responses from all four groups. Mean responses fell within the positive range in response to this statement, principals yielding the strongest agreement, with a mean score of 6.30, followed by teachers at 6.00. The mean score for counselors was only slightly lower at 5.95. The student mean score was the lowest, at 5.15.

Teachers and principals were polled on whether they felt the "OCCUPATIONAL CLUSTER" IS AN EFFECTIVE TEACHING MODE. Both groups indicated that they did feel it to be effective, principals yielding a slightly higher mean score of 6.30, while the mean score for teachers was 5.95.

Students were asked to respond to an item closely related to the above section. They were polled as to whether they felt their practical arts classes provided SUFFICIENT TIME ALLOCATION TO COVER THE SUBJECT STUDIED. The statement was negatively phrased, and the student mean score fell within the "Disagree" range at 3.75.

The perceived degrees of acceptance of the practical arts program by various school and community factions were also polled. The DEGREE OF ACCEPTANCE BY PRINCIPALS was polled of teachers and counselors. Both of these groups indicated positive principal attitudes, teachers yielding a mean score of 6.22, and counselors a slightly higher mean score of 6.30.

Perceptions of counselors and principals were polled as to whether the PRACTICAL ARTS STAFF at their schools FELT POSITIVELY ABOUT THEIR PROGRAM. Both of these groups indicated close agreement on this statement, with mean scores of 6.22 and 6.30 for counselors and teachers respectively.

Teachers and principals were asked their opinions regarding whether GUIDANCE COUNSELORS REGARD THE PROGRAM AS WORTHWHILE. Both groups expressed relatively strong agreement on this, teachers ranking this statement slightly higher with a mean of 6.37, with the principals' mean score being 6.20.

Principals and teachers were asked to respond to a negatively phrased statement measuring teacher attitudes relative to INCREASED TEACHER DUTIES INCURRED DUE TO PRACTICAL ARTS INVOLVEMENT. The mean score for principals fell within the "Disagree" range, at 3.10. Teacher attitudes resulted in a mean score within the "Undecided" range, at 4.10.

Counselors were also polled as to whether INCREASED COUNSELOR DUTIES INCURRED DUE TO PRACTICAL ARTS INVOLVEMENT posed a problem of overwork for them. Responses to a negatively phrased statement yielded mean scores within the "Disagree" range at 2.70.

One inference that this researcher made from these findings relative to INCREASED DUTIES is that perhaps a stronger degree of counselor involvement with practical arts duties may be indicated, since teachers, although not indicating that they actually feel overworked at this point, seem to be leaning in that direction.

A negatively phrased statement regarding the ATTITUDE OF OTHER FACULTY TOWARD PRACTICAL ARTS yielded negative mean scores for all three groups, principals disagreeing most strongly and yielding a mean score

of 2.30. The mean score for counselors indicated only a slightly less amount of disagreement at 2.45. Practical arts teachers disagreed less with this negative statement than did the other two groups, yielding a mean score of 3.78.

The DEGREE OF PARENTAL ACCEPTANCE OF PRACTICAL ARTS was polled across all four groups. Counselors yielded the highest mean score, 6.00, on this aspect. Students and teachers yielded the next highest mean scores, at 5.24 and 5.10, respectively. The mean scores for principals was the lowest of the four groups, at 4.80.

A statement to measure THE DEGREE OF PROGRAM ACCEPTANCE BY COMMUNITY RESOURCE PERSONS was utilized on all four questionnaires. Principals seemed to feel most positively regarding this aspect, yielding a mean score of 6.10. Counselors and teachers, however, indicated only slightly less positive attitudes relative to this aspect, yielding mean scores of 6.00 and 5.78, respectively. Students scored this statement slightly lower, yielding a mean score of 4.85.

Data on PROGRAM EFFECTIVENESS AND ACCEPTANCE are shown in Table 13.

Impact of Practical Arts Program on Students

The survey instruments developed for this study also attempted to measure attitudes of the four surveyed groups relative to the impact (or benefits) derived by students from practical arts classes. Related readings in career education plus guidelines set forth by the state Board of Education indicated that the following were six of the major areas of student impact, or benefit, to be derived from practical arts education:

1. Developing an increased interest in school (and preventing of student dropouts)
2. Developing an increased career knowledge
3. Providing assistance in planning future studies
4. Providing more realistic view of the world of work
5. Generating an increased curiosity about careers
6. Developing an increased awareness of oneself as a future participant in the world of work

Six attitudinal statements to measure the perceptions of each of the four groups were developed for each questionnaire. A seven-point Likert-type scale was used for measuring attitudes for these statements (7--Strongly Agree to 1--Strongly Disagree).

Counselors and practical arts teachers felt most strongly that practical arts aided in INCREASING INTEREST IN SCHOOL (AND PREVENTING DROPOUTS). Their mean scores were 5.35 and 5.20 respectively. Principal and student attitudes yielded mean values only slightly lower, however, at 5.00 and 4.64 respectively.

Table 13

Means and Standard Deviations of Educators' and Students' Responses** to Attitudinal Survey Items Relative to Practical Arts Program Effectiveness and Acceptance

Attitudinal Survey Items	Student Rating	Teacher Rating	Counselor Rating	Principal Rating
Students are interested in subjects taught in practical arts	$\bar{X}$=4.83 SD=1.78 N=452	$\bar{X}$=5.58 SD=1.42 N=19	$\bar{X}$=5.50 SD=1.32 N=20	$\bar{X}$=5.90 SD=1.02 N=20
Subjects in practical arts are not challenging to students*	$\bar{X}$=2.94* SD=1.57 N=451	$\bar{X}$=2.75* SD=1.74 N=20	$\bar{X}$=2.47* SD=1.17 N=19	$\bar{X}$=2.45* SD=1.47 N=20
Practical arts classes should be eliminated so that students can have more time for more academic subjects*	$\bar{X}$=2.33* SD=1.71 N=447	$\bar{X}$=1.90* SD=1.29 N=20	$\bar{X}$=1.90* SD=1.48 N=20	$\bar{X}$=2.15* SD=1.31 N=20
Practical arts staff are effective teachers	$\bar{X}$=5.74 SD=1.63 N=451	$\bar{X}$=5.70 SD=1.22 N=20	$\bar{X}$=6.30 SD= .86 N=20	$\bar{X}$=6.40 SD= .60 N=20
Teachers know a lot about subject	$\bar{X}$=5.87 SD=1.47 N=446	--	--	--
Practical arts classes are appropriate for this age student	$\bar{X}$=1.85* SD=1.32 N=452	$\bar{X}$=6.35 SD=1.23 N=20	$\bar{X}$=6.60 SD= .68 N=20	$\bar{X}$=6.50 SD= .76 N=20
Practical arts classes are doing an effective job of providing students with an exploration of careers	$\bar{X}$=5.15 SD=1.44 N=449	$\bar{X}$=6.00 SD= .79 N=20	$\bar{X}$=5.95 SD=1.28 N=20	$\bar{X}$=6.30 SD= .73 N=20
The "occupational cluster" concept is an effective mode of teaching practical arts	--	$\bar{X}$=5.95 SD= .76 N=20	--	$\bar{X}$=6.30 SD= .57 N=20
Number of weeks for this class is not enough time to cover this subject*	$\bar{X}$=3.75* SD=2.02 N=455	--	--	--
Principal has a positive attitude toward practical arts program	--	$\bar{X}$=6.22 SD=1.00 N=18	$\bar{X}$=6.30 SD= .92 N=20	--
Practical arts staff has a positive attitude toward the program	--	--	$\bar{X}$=6.16 SD=1.12 N=19	$\bar{X}$=6.20 SD= .95 N=20
Guidance counselor things practical arts program is worthwhile	--	$\bar{X}$=6.37 SD= .76 N=19	--	$\bar{X}$=6.20 SD=1.06 N=20
Teachers feel overworked due to increased responsibilities incurred due to practical arts teaching*	--	$\bar{X}$=4.10* SD=2.02 N=20	--	$\bar{X}$=3.10* SD=1.89 N=20
Counselors feel overworked due to increased responsibilities incurred due to practical arts involvement*	--	--	$\bar{X}$=2.70* SD=1.56 N=20	--

Table 13 - Continued

Attitudinal Survey Items	Student Rating	Teacher Rating	Counselor Rating	Principal Rating
The attitude of faculty members toward practical arts program is negative*	--	$\bar{X}$=3.78* SD=2.26 N=18	$\bar{X}$=2.45* SD=1.57 N=20	$\bar{X}$=2.30* SD=1.38 N=20
Parents encourage their children to take practical arts classes	$\bar{X}$=5.24 SD=1.53 N=443	$\bar{X}$=5.10 SD= .94 N=19	$\bar{X}$=6.00 SD=1.00 N=19	$\bar{X}$=4.80 SD=1.44 N=20
Employers who participate in practical arts field trips strive to make visiting students welcome	$\bar{X}$=4.85 SD=1.72 N=417	$\bar{X}$=5.78 SD= .88 N=18	$\bar{X}$=6.00 SD=1.00 N=19	$\bar{X}$=6.10 SD= .85 N=20

* Negatively Stated
** Seven-point rating scale (7=Strongly Agree; 1=Strongly Disagree)

Teachers, principals and counselors all yielded similar mean scores on attitudes relative to whether practical arts resulted in students gaining INCREASED CAREER KNOWLEDGE, with respective mean scores of 6.15, 6.11, and 6.10. Students yielded a slightly lower mean score of 5.20 on this aspect.

Respondents also expressed their opinions as to whether practical arts classes ASSIST IN PLANNING FUTURE STUDIES. The mean score of teachers was the highest of the four surveyed groups at 6.20. Principal and counselor mean scores were slightly lower at 6.05 and 5.80, respectively. Students scored this aspect the lowest of the four groups, with a mean score of 5.16.

All respondents were polled on their attitudes relative to whether the practical arts program, (with its "hands-on" activities, "shadowing" activities, etc.) PROVIDES A MORE REALISTIC VIEW OF THE WORLD OF WORK. Teachers' attitudes on this aspect were the most positive of the four groups, yielding a mean score of 6.45. Principals, counselors, and students also expressed fairly strong agreement, however, yielding mean scores of 6.20, 6.15, and 5.56 respectively.

All groups expressed fairly strong agreement that a practical arts program GENERATES AN INCREASED CURIOSITY ABOUT CAREERS, teachers the most strongly at a mean score of 6.15, with principals, counselors, and students also yielding fairly compatible mean scores of 6.05, 5.90, and 5.17, respectively.

Data on the attitudinal statement relative to whether practical arts classes resulted in students acquiring AN INCREASED AWARENESS OF THEMSELVES AS FUTURE PARTICIPANTS IN THE WORLD OF WORK revealed that teachers and principals agreed most strongly with this statement, both yielding mean scores of 6.20. The next highest mean score was that of counselors, at 6.05. Students' mean score, still in the positive range, was 5.49.

Data for IMPACT OF PRACTICAL ARTS PROGRAM ON STUDENTS are reported in Table 14.

Table 14

Means and Standard Deviations of Educators' and Students' Responses* to Attitudinal Survey Items Relative to the Impact of Practical Arts Programs Upon Students

Attitudinal Survey Items	Student	Teacher	Principal	Counselor
Increases Interest in School (Aids in Prevention of Student Dropout)	$\bar{X}$=4.64 SD=1.96 N=455	$\bar{X}$=5.20 SD=1.15 N=20	$\bar{X}$=5.00 SD=1.75 N=20	$\bar{X}$=5.35 SD=1.50 N=20
Increases Career Knowledge	$\bar{X}$=5.20 SD=1.49 N=448	$\bar{X}$=6.15 SD= .67 N=20	$\bar{X}$=6.11 SD= .66 N=19	$\bar{X}$=6.10 SD= .91 N=20
Assists in Planning Future Studies	$\bar{X}$=5.16 SD=1.61 N=455	$\bar{X}$=6.20 SD= .70 N=20	$\bar{X}$=6.05 SD= .76 N=20	$\bar{X}$=5.80 SD=1.47 N=20
Provides More Realistic View of World of Work	$\bar{X}$=5.56 SD=1.36 N=449	$\bar{X}$=6.45 SD= .76 N=20	$\bar{X}$=6.20 SD= .70 N=20	$\bar{X}$=6.15 SD=1.35 N=20
Increases Curiosity about Careers	$\bar{X}$=5.17 SD=1.56 N=449	$\bar{X}$=6.15 SD= .81 N=20	$\bar{X}$=6.05 SD= .69 N=20	$\bar{X}$=5.90 SD=1.37 N=20
Increases Awareness of themselves as Future Participants in World of Work	$\bar{X}$=5.49 SD=1.53 N=448	$\bar{X}$=6.20 SD= .77 N=20	$\bar{X}$=6.20 SD= .70 N=20	$\bar{X}$=6.05 SD=1.47 N=20

*Seven-point rating scale (7=Strongly Agree; 1=Strongly Disagree)

Summary, Conclusions and Recommendations Relative to Questionnaire Data

The questionnaire component of this study was designed to poll programmatic aspects of the state practical arts program plus monitor attitudes relative to program effectiveness, acceptance and degree of impact upon students. The data were collected by means of questionnaires disseminated to a random sample of principals, counselors, practical arts teachers, and practical arts students. Findings reported in this study may be utilized for practical arts program development, implementation, and refinement. Conclusions and recommendations are made in light of the limitations stated earlier in this chapter.

Conclusions

Based upon the findings reported previously in this chapter, the following conclusions are judged by this researcher to be the most noteworthy.

Conclusion #1. Considering the recent inception of Kentucky practical arts education, the findings of this study indicate that this program has been efficiently and effectively implemented within a short period of time.

Conclusion #2. Findings in this study indicate that practical arts educators, although having limited financial resources, have developed well-organized programs which were perceived as being beneficial and meaningful to students.

Conclusion #3. Most teachers felt that the size of their practical arts class was appropriate.

Conclusion #4. The class composition of most practical arts classes consisted of students from a cross-section of different family income levels and academic levels.

Conclusion #5. The quality of supplies, materials, and equipment was generally considered acceptable by teachers, principals, students and counselors. Students, however, felt more were needed.

Conclusion #6. The quality of career information available to students was ranked highly by all groups polled--teachers, students, principals, and counselors. The educator group surveyed generally indicated a sufficient quantity of career information was available. Students, however, felt more was needed.

Conclusion #7. Teachers, students, principals, and counselors all indicated moderate satisfaction with their school's vocational interest and ability testing program.

Conclusion #8. Both principals and counselors felt quite strongly that their school's vocational interest and ability testing program was an integral part of student career and curriculum guidance. Teachers, while indicating a positive attitude regarding this, did not feel quite as strongly.

Conclusion #9. The joint responsibility of teachers and counselors for career guidance of students was viewed positively by teachers, counselors, and principals. Students indicated that both counselors and teachers were providing them with a moderately satisfactory quality of career/curriculum guidance.

Conclusion #10. The educators surveyed indicated a moderate degree of satisfaction with the quality and quantity of pre-service training they had experienced. A slightly higher degree of satisfaction was expressed with the quality of inservice/workshop training. All groups--counselors, teachers, and principals--agreed quite strongly that they needed periodic inservice/workshop training for the maintenance of their professional competency.

Conclusion #11. Teachers, counselors, and principals all ranked one another as providing the highest degree of support in practical arts program development and/or implementation. State education personnel were then ranked next in support by principals and counselors, while teachers ranked community resource persons as their next highest source of support.

Conclusion #12. Students, teachers, counselors, and principals all indicated agreement that practical arts classes are reflective of students' interests.

Conclusion #13. Students, teachers, counselors, and principals all felt that practical arts classes are challenging to students.

Conclusion #14. The teaching effectiveness of practical arts teachers was ranked highly by counselors, students, principals, and the teachers themselves.

Conclusion #15. Students felt that their practical arts teachers were knowledgeable in the subject matter which they were teaching.

Conclusion #16. Students, teachers, counselors, and teachers all felt that practical arts classes are appropriate for this age student.

Conclusion #17. Students, teachers, counselors, and principals all felt that practical arts classes are effective in providing students with an exploration of careers and should be maintained as part of school curriculum offerings.

Conclusion #18. The perceived attitudes of the principals, guidance counselors, the practical arts teaching staff, other faculty members, parents, and community resource persons toward the practical arts program were polled. An overall positive attitude toward the program was perceived by both the students and educators surveyed. However, the attitudes of other faculty and parents were perceived to be less positive than the attitudes of other persons involved with the program.

Conclusion #19. Counselors did not indicate they felt overworked due to their involvement with practical arts; teachers, however, were less decided as to whether teaching practical arts classes involved excessive additional work for them.

Conclusion #20. Students, teachers, counselors, and principals all indicated that they felt that practical arts education was having a beneficial impact upon students, resulting in an increased interest in school, increased career knowledge, assistance in planning future studies, provision of a more realistic view of the world of work, an increased curiosity about careers, and an increased student awareness of themselves as future participants in the world of work.

Recommendations

The following recommendations are made based on the findings of this research:

1. Inservice or workshop training should be provided at least once a year for practical arts teachers, counselors, and administrators.

2. A stronger effort should be made to diffuse results of student vocational interest and ability tests to teachers, or results should be made readily accessible and ready for utilization by teachers when needed.

3. Greater involvement and familiarization of all faculty members with a school's practical arts program is recommended. This might be at least partially achieved through presentations by the school practical arts staff and/or state personnel.

4. A need for greater parental familiarization with the practical arts program is indicated. Some recommendations in this area include encouragement of parental visitation and involvement in practical arts classes, providing information to parents regarding the practical arts program, and/or presentations (perhaps using slides or films) explaining the program at parent-teacher association meetings.

5. In cases where teachers have assumed the major portion of duties involved with practical arts activities, more counselor/teacher cooperation is encouraged in order to involve both the practical arts staff and the guidance staff in the program.

CHAPTER III

METHODS, PROCEDURES, AND FINDINGS RELATIVE TO ACD DATA

Introduction

The Assessment of Career Development (ACD) instrument, developed by the American College Testing Program, is a guidance assessment instrument designed for administration to eighth through eleventh grade students. Its developers do not claim that it measures all important aspects of career development, but that it does focus on "core aspects of career development that can be economically and objectively measured through use of standardized group assessment."

The structure of the ACD is directed toward the measurement of the three following components of career development:

1. Occupational Awareness -- this includes occupational knowledge and exploratory occupational experiences.

2. Self Awareness -- this includes job values, career plans, self-evaluation of career planning, and perceived needs for help with career planning. (Due to the self-report nature of this data, this component is not reported or scored in the group summaries. The information derived from this section is intended for utilization by guidance personnel.)

3. Career Planning and Decision Making -- this includes career planning knowledge and involvement in career planning experiences.

Results of ACD administrations are reported for 11 scales and 42 specific questions. Of these 11 scales, 3 report career-related knowledge, and 8 report career-related experiences. An acceptable degree of reliability and validity has been determined by the developers for this instrument.[4]

The ACD data reported in this study were obtained from three sources:

1. Non-practical arts data: In 1975, as part of a statewide testing program, eighth grade students in approximately 90 districts across the state were

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[4]D. J. Prediger, J. D. Roth, and R. J. Noeth. Nationwide Study of Career Development: Summary of Results (Iowa City, Iowa: Research and Development Division, The American College Testing Program, 1973).

administered the Assessment of Career Development test. A sample of eighth grade students from each of the participating schools were tested utilizing the ACD (rather than the entire eighth grade class at each school.) The size of the total group tested statewide numbered 6419. These students were not involved in practical arts programs.

2. Practical arts data: Later in the 1975 school year a sample of schools having funded practical arts programs was drawn. A random sample of practical arts students from these schools were administered the ACD. Test results from 25 schools were then compiled into summaries from 19 districts. The total student N-size for the practical arts administration was 818.

3. National norms: National norms for the ACD were established in 1973 by its developer, the American College Testing Program. Traditionally accepted national norming procedures were utilized by the developers in establishing these norms. Students were chosen to include a representative selection from different size communities and varying regions of socioeconomic status, based on census data. The eighth grade norm size was established at 8,822 students.[5]

This chapter will contrast these data sets to determine if differences exist between eighth graders who have experienced practical arts education, eighth grade students who have not experienced practical arts education, and eighth grade national norms relative to areas measured by the ACD.

Limitations of the Study

Formal comparative analysis of ACD data was hindered because individual school and student results involved in the first 1975 statewide administration of the ACD were not available. State summaries of both groups were available and are reported and contrasted with national ACD norms. Differences shown were not treated with any statistical tests and refer only to casual differences observed.

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[5]Ibid., pp. 7-8.

Analysis of Findings

The following findings are relative to the two Kentucky ACD administrations--Practical Arts and Non-Practical Arts--and these data are contrasted with the established national norms. The findings are reported for 11 scales--3 reporting career-related knowledge, and 8 reporting career-related experiences. Data are also reported according to sex, male and female, and by total score.

In Knowledge of Occupational Characteristics practical arts male and female mean scores were slightly higher than both the non-practical arts male mean scores and the national norm male mean scores. The total mean score for the practical arts students was slightly higher than both the total non-practical arts mean score and the total national norm score. (See Table 15.)

Table 15

Knowledge of Occupational Characteristics as Measured By ACD For Practical Arts Students and Non-Practical Arts Students as Compared to National ACD Norms

	Practical Arts			Non-Practical Arts			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mean	30.60	32.24	31.39	29.72	30.72	30.23	29.76	31.39	30.59
SD	8.62	7.96	8.35	3.82	2.22	3.14	9.51	8.58	9.08
N	421	397	818	3118	3301	6419	4384	4438	8822

On Knowledge of Occupational Preparation Requirements the mean score for practical arts males was slightly lower than both the mean score of non-practical arts males and the mean score of national norm males. Practical arts females' mean score was slightly higher than both non-practical arts females' mean score and the mean score of national norm females. The total mean score of practical arts students was slightly higher than both the non-practical arts total mean score and the total national norm mean score. (See Table 16.)

Table 16

Knowledge of Occupational Preparation Requirements as Measured By ACD For Practical Arts Students and Non-Practical Arts Students as Compared to National ACD Norms

	Practical Arts			Non-Practical Arts			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mean	9.65	10.20	9.92	9.29	9.79	9.55	9.03	9.72	9.38
SD	3.07	2.79	2.95	3.08	2.80	2.95	3.24	2.96	3.12
N	421	397	818	3117	3301	6418	4384	4438	8822

On Total Exploratory Occupational Experiences, practical arts males scored slightly lower than non-practical arts males and lower than the male national norm. Practical arts females scored slightly higher than both non-practical arts females and the national norm. Practical arts total mean scores were slightly higher than non-practical arts students' total mean scores and slightly lower than national norm total mean scores. (See Table 17.)

Table 17

Total Exploratory Occupational Experiences as Measured By ACD For Practical Arts Students and Non-Practical Arts Students as Compared to National ACD Norms

	Practical Arts			Non-Practical Arts			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mean	1.78	1.77	1.78	1.79	1.73	1.76	1.81	1.76	1.79
SD	0.28	0.28	0.28	0.32	0.32	0.32	0.29	0.28	0.28
N	418	394	812	3087	3282	6369	4384	4438	8822

On Exploratory Occupational Experiences in Social, Health, and Personal Services practical arts males mean scores were slightly lower than both the non-practical arts male mean scores and the national male mean scores. Practical arts females mean scores were slightly higher than non-practical arts female mean scores and slightly lower than national female norm scores. Practical arts total mean scores were slightly higher than non-practical arts mean scores and slightly lower than total national norm mean scores. (See Table 18.)

Table 18

Exploratory Occupational Experiences in Social, Health, and Personal Services as Measured By ACD For Practical Arts Students and Non-Practical Arts Students As Compared to National ACD Norms

	Practical Arts			Non-Practical Arts			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mean	1.75	1.97	1.86	1.79	1.91	1.85	1.82	1.98	1.90
SD	0.35	0.39	0.37	0.37	0.39	0.39	0.37	0.38	0.38
N	418	394	812	3089	3282	6371	4384	4438	8822

A similar pattern was observed for Exploratory Occupational Experiences in Business Sales and Management. Practical arts males received slightly lower mean scores than the non-practical arts males or the national norm males. Practical arts females' mean scores were slightly higher than non-practical arts females' and slightly lower than the national norm females'. Total mean scores for the practical arts group and non-practical arts group were identical, but slightly lower than the total national norm mean scores. (See Table 19.)

Table 19

Exploratory Occupational Experiences in Business Sales and Management as Measured By ACD For Practical Arts Students and Non-Practical Arts Students as compared to National ACD Norms

	Practical Arts			Non-Practical Arts			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mean	1.72	1.75	1.74	1.75	1.73	1.74	1.78	1.80	1.79
SD	0.33	0.36	0.35	0.36	0.37	0.37	0.36	0.36	0.36
N	418	394	812	3089	3282	6371	4384	4438	8822

On Exploratory Occupational Experiences in Business Operations, practical arts males and non-practical arts males received the same mean scores, and these mean scores were slightly lower than the national male mean score. Practical arts females received slightly higher mean scores than non-practical arts females, and slightly lower mean scores than the national female norms. Practical arts total mean scores were slightly higher than non-practical arts total mean scores and slightly lower than total national norm mean scores. (See Table 20.)

Table 20

Exploratory Occupational Experiences in Business Operations As Measured By ACD For Practical Arts Students and Non-Practical Arts Students as Compared to National ACD Norms

	Practical Arts			Non-Practical Arts			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mean	1.65	1.71	1.68	1.65	1.66	1.65	1.66	1.72	1.69
SD	0.37	0.35	0.36	0.37	0.37	0.37	0.35	0.36	0.36
N	418	394	812	3085	3281	6366	4384	4438	8822

On Exploratory Occupational Experiences in Technologies and Trades, practical arts males mean scores were slightly higher than non-practical arts males' mean scores and slightly lower than national male norm mean scores. Again, practical arts females' mean scores were slightly higher than both non-practical arts females' mean scores and national norm female mean scores. Practical arts student total mean scores were slightly higher than both non-practical arts total mean scores and total national norm mean scores. (See Table 21.)

Table 21

Exploratory Occupational Experiences in Technologies and Trades as Measured By ACD For Practical Arts Students and Non-Practical Arts Students as Compared to National ACD Norms

	Practical Arts			Non-Practical Arts			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mean	2.05	1.59	1.83	2.03	1.57	1.79	2.10	1.55	1.81
SD	0.37	0.33	0.42	0.39	0.35	0.44	0.39	0.33	0.45
N	418	394	812	3086	3282	6368	4384	4438	8822

On Exploratory Occupational Experiences in Natural, Social, and Medical Services practical arts males' mean scores were slightly lower than both non-practical arts male mean scores and national male norm mean scores. Practical arts females' mean scores were slightly higher than non-practical arts female mean scores and slightly lower than national norm female mean scores. Practical arts total mean scores were slightly lower than both non-practical arts total mean scores and national norm total mean scores. (See Table 22.)

Table 22

Exploratory Occupational Experiences in Natural, Social, and Medical Services as Measured By ACD For Practical Arts Students and Non-Practical Arts Students as Compared to National ACD Norms

	Practical Arts			Non-Practical Arts			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mean	1.73	1.64	1.68	1.75	1.62	1.69	1.76	1.65	1.70
SD	0.37	0.35	0.36	0.37	0.35	0.37	0.37	0.34	0.36
N	417	394	811	3090	3281	6371	4384	4438	8822

On Exploratory Occupational Experiences in Creative and Applied Arts practical arts male mean scores were slightly lower than both non-practical arts male mean scores and national norm male mean scores. Practical arts female mean scores were slightly higher than non-practical arts female mean scores and the same as national norm female mean scores. Practical arts total mean scores were slightly higher than non-practical arts total mean scores and slightly lower than national norm mean scores. (See Table 23.)

Table 23

Exploratory Occupational Experiences in Creative and Applied Arts as Measured By ACD For Practical Arts Students and Non Practical Arts Students as Compared to National ACD Norms

	Practical Arts			Non-Practical Arts			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mean	1.77	1.94	1.85	1.78	1.88	1.83	1.79	1.94	1.87
SD	0.37	0.36	0.39	0.37	0.37	0.37	0.36	0.35	0.36
N	418	394	812	3090	3282	6372	4384	4438	8822

On Career Planning Knowledge practical arts male mean scores were slightly higher than both the non-practical arts male mean scores and the national norm mean scores. Practical arts females mean scores were also slightly higher than both the non-practical arts female mean scores and the national norm female mean scores. The total practical arts mean score was slightly higher than both the total non-practical arts mean score and the total national norm mean score. (See Table 24.)

Table 24

Career Planning Knowledge as Measured By ACD For Practical Arts Students and Non-Practical Arts Students as Compared to National ACD Norms

	Practical Arts			Non-Practical Arts			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mean	23.34	25.29	24.28	21.86	24.21	23.07	22.13	24.33	23.26
SD	5.98	5.29	5.74	5.47	5.36	5.78	5.45	5.10	5.38
N	419	395	814	3093	3294	6387	4384	4438	8822

On Career Planning Involvement the practical arts male mean score was slightly higher than both the non-practical arts male mean score and the national norm male mean score. The practical arts female mean score was also slightly higher than both the non-practical arts female mean score and the national norm female mean score. The practical arts total mean score was slightly higher than both the non-practical arts total mean score and the national total mean score. (See Table 25.)

Table 25

Career Planning Involvement as Measured By ACD For Practical Arts Students and Non-Practical Arts Students as Compared to National ACD Norms

	Practical Arts			Non-Practical Arts			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mean	1.77	1.77	1.77	1.70	1.67	1.69	1.67	1.64	1.65
SD	0.26	0.30	0.28	0.28	0.30	0.30	0.32	0.31	0.32
N	419	396	815	3101	3293	6394	4384	4438	8822

In summary, total practical arts students received higher mean scores than total non-practical arts students on 24 of the areas reported by the ACD. The non-practical arts students received higher mean scores than practical arts students on 7 of the areas reported. Practical arts students and non-practical arts students received the same mean scores on 2 areas reported by the ACD. (See Appendix I.)

Practical arts students received higher mean scores than national norm mean scores on 14 areas reported by the ACD. National norm mean scores were higher than practical arts norm mean scores on 18 areas reported by the ACD. Practical arts mean scores and national norm mean scores were the same on one area measured by the ACD. (See Appendix J.)

It should be noted that, for the practical arts group, females scored consistently higher, while male scores were somewhat lower on the ACD. The total scores reported for practical arts students were influenced by the sex factor, i.e., the female scores tended to make the total scores greater overall than the overall non-practical arts students.

Conclusions

The data reported earlier in this chapter lead this researcher to conclude that at the time of the ACD administrations students in Kentucky with practical arts educational experience were as a whole more cognizant in areas measured by the ACD than were students in Kentucky who did not have practical arts educational experience.

Although national norm mean scores were higher on all but one area of exploratory occupational experiences, practical arts students achieved higher mean scores on all but one cognitive area measured by the ACD.

Recommendations

The following recommendations are based upon the findings reported in this chapter.

1. Kentucky practical arts educators should focus on increasing the amount of actual student exploratory experiences in a variety of occupations while still maintaining their excellent level of cognitive instruction relative to career exploration.

2. Since several years have elapsed since the collection of this data and since the study necessitated an ex post facto design, this researcher feels the need for a further, more current, and more carefully controlled study utilizing an experimental design to measure practical arts student gain is indicated.

APPENDIX A

Practical Arts Program Student Questionnaire

Practical Arts Program

STUDENT QUESTIONNAIRE

Developed by
Center for Career and Vocational Teacher Education
Western Kentucky University
in cooperation with
Practical Arts Unit
Bureau of Vocational Education
Kentucky Department of Education

STUDENT

I. Please answer the following questions about yourself.

1. Male _____ Female _____

2. Age _____

II. A. Please rate each of the following about YOUR SCHOOL.
B. Then check whether or not MORE is needed at YOUR SCHOOL.

	A) How good is it? Excellent	Good	Fair	Poor	Do Not Have Any	B) Do you need more? Yes	No
1. Materials and supplies we use in THIS CLASS.							
2. Equipment we use in THIS CLASS.							
3. Testing by counselor (or others) to help me know what kinds of work I'd do best.							
4. Testing by counselor (or others) to help me know what kinds of work interest me most.							
5. Reading materials available to me about career information.							
6. Counseling help for my questions about courses and careers.							
7. Teacher help for my questions about courses and careers.							

III. Check one space for each of these statements that most closely matches YOUR OPINION.

	Strongly Agree	Agree	Somewhat Agree	Undecided	Somewhat Disagree	Disagree	Strongly Disagree
1. This class does an excellent job in helping me learn about the careers we study.							
2. I am too young to be studying about careers.							
3. This class covers subjects in which I'm really interested.							
4. The subjects we study in this class are too easy.							
5. School is more interesting to me since I started taking classes like this.							

	Strongly Agree	Agree	Somewhat Agree	Undecided	Somewhat Disagree	Disagree	Strongly Disagree
6. Practical arts classes should be dropped so I can spend more time on other school subjects.							
7. Practical arts classes have really increased my knowledge about careers.							
8. This class will help me in planning what other courses I want to take.							
9. The skills I learn in this class give me a better idea what this kind of work is really like.							
10. Practical arts classes make me want to know more about different kinds of jobs.							
11. Practical arts classes have helped me to think more about my future career.							
12. My teacher in this class does a good job of teaching.							
13. My teacher in this class knows a lot about the subjects we study.							
14. When I go on field trips with this class, the people we visit always make us feel welcome.							
15. My parents are glad I'm taking this class.							
16. There are too many students in this class.							
17. The number of weeks for this class is not enough time to cover this subject.							

APPENDIX B

Practical Arts Program Principal Questionnaire

PRINCIPAL

I. Please check or complete the following information about yourself:

1. Male _____ Female _____

2. Provide your number of years experience in each:
   _____ Non-teaching work experience
   _____ Teaching experience
   _____ Practical arts teaching experience
   _____ Administrative experience

3. Total number of students enrolled in your school: _____

4. Check all occupational clusters covered at your school.

   1. _____ Agribusiness, Natural Resources and Environmental Occupations
   2. _____ Business and Office Occupations
   3. _____ Communications and Media Occupations
   4. _____ Construction Occupations
   5. _____ Consumer and Home Economics Occupations
   6. _____ Fine Arts and Humanities Occupations
   7. _____ Health Occupations
   8. _____ Manufacturing Occupations
   9. _____ Marketing and Distribution Occupations
   10. _____ Public and Personal Service Occupations
   11. _____ Recreation and Hospitality Occupations
   12. _____ Transportation Occupations
   13. _____ Me, Money, and Careers

II. Please rate each of the following aspects of YOUR SCHOOL PROGRAM.

	QUALITY					QUANTITY				
	Excellent				Poor	Adequate				Inadequate
	5	4	3	2	1	5	4	3	2	1
Teaching materials and supplies used in practical arts program.	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]
Equipment used in teaching practical arts.	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]
Career information available to students.	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]
Testing of students for vocational interests.	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]
Testing of students for vocational ability.	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]
Assisting students with career and curriculum guidance.	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]
Preservice training for practical arts personnel and administrators.	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]
Inservice and/or workshop training for practical arts personnel and administrators.	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]

III. Please indicate the degree of support provided by each of the following in the development and/or implementation of the practical arts program in your school. Place a check (✓) in the appropriate box that most closely matches your opinion.

	Substantial Support	Much Support	Moderate Support	Minimal Support	No Support
Practical arts program teachers					
Guidance counselor(s)					
Other faculty members in your school					
Parents					
Community resource persons					
High school career education staff					
State education personnel					
University faculty					
Others (please specify) _____					
_____					

IV. Please respond to each of the following items regarding practical arts in YOUR SCHOOL. Check your response using the following scale:

- Strongly Agree - SA
- Agree - A
- Somewhat Agree - SWA
- Undecided - U
- Somewhat Disagree - SWD
- Disagree - D
- Strongly Disagree - SD

	SA	A	SWA	U	SWD	D	SD
1. I feel that practical arts classes are doing an effective job of providing students with an exploration of careers.							
2. Practical arts classes are appropriate for this age student.							
3. Students are genuinely interested in the subjects covered in practical arts.							
4. The subjects covered in practical arts are not challenging to students.							
5. Practical arts classes contribute to prevention of student drop-outs.							
6. Practical arts classes should be eliminated so that students can have more time for more academic subjects.							

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	SA	A	SWA	U	SWD	D	SD
7. After taking practical arts classes, most students have an increased knowledge of careers.							
8. Practical arts assists students in planning future studies.							
9. The "hands-on" experiences students have in practical arts give them a more realistic look at the world of work.							
10. Practical arts generates an increased curiosity about careers on the part of many students.							
11. Practical arts helps students develop an increased awareness of themselves as future participants in the world of work.							
12. The "occupational cluster" concept is an effective mode of teaching practical arts.							
13. Teaching practical arts classes entails too many additional responsibilities for teachers.							
14. Our practical arts staff are effective teachers.							
15. Periodic inservice and/or workshop training in practical arts is important in the maintenance of a professionally competent staff.							
16. Employers who participate in our practical arts field trips always strive to make visiting students welcome.							
17. Parents in this community encourage their children to take practical arts classes.							
18. The practical arts staff at our school has a positive attitude toward the program.							
19. The attitude of other faculty members toward the practical arts program is negative.							
20. The guidance counselor(s) thinks practical arts is a worthwhile program.							
21. Vocational interest and/or ability tests are an integral part of student career and curriculum guidance at this school.							
22. Career guidance is the joint responsibility of the counselor(s) and the teachers at this school.							

APPENDIX C

Practical Arts Program Teacher Questionnaire

TEACHER

I. Please check or complete the following information about yourself:

1. Male _____ Female _____

2. Provide your number of years experience in each:
   _____ Non-teaching work experience
   _____ Teaching experience
   _____ Practical arts teaching experience

II. Please rate each of the following aspects of YOUR SCHOOL PROGRAM.

	QUALITY (Excellent 5 4 3 2 1 Poor)	QUANTITY (Adequate 5 4 3 2 1 Inadequate)
Teaching materials and supplies used in practical arts program.	[] [] [] [] []	[] [] [] [] []
Equipment used in teaching practical arts.	[] [] [] [] []	[] [] [] [] []
Career information available to students.	[] [] [] [] []	[] [] [] [] []
Testing of students for vocational interests.	[] [] [] [] []	[] [] [] [] []
Testing of students for vocational ability.	[] [] [] [] []	[] [] [] [] []
Assisting students with career and curriculum guidance.	[] [] [] [] []	[] [] [] [] []
Preservice training for practical arts teachers.	[] [] [] [] []	[] [] [] [] []
Inservice and/or workshop training for practical arts teachers.	[] [] [] [] []	[] [] [] [] []

III. Please indicate the degree of support provided by each of the following in the development and/or implementation of the practical arts program in your school. Place a check (✓) in the appropriate box that most closely matches your opinion.

	Substantial Support	Much Support	Moderate Support	Minimal Support	No Support
Principal					
Guidance counselor(s)					
Other teachers in your school					
Parents					
Community resource persons					
High school career education staff					
State education personnel					
University faculty					
Other (please specify)_____					

IV. Please respond to each of the following items regarding practical arts in YOUR SCHOOL.
Check your response using the following scale:

Strongly Agree	- SA
Agree	- A
Somewhat Agree	- SWA
Undecided	- U
Somewhat Disagree	- SWD
Disagree	- D
Strongly Disagree	- SD

		SA	A	SWA	U	SWD	D	SD
1.	I feel that practical arts classes are doing an effective job of providing students with an exploration of careers.							
2.	Practical arts classes are appropriate for this age student.							
3.	Students are genuinely interested in the subjects covered in practical arts.							
4.	The subjects covered in practical arts are not challenging to students.							
5.	Practical arts classes contribute to prevention of student drop-outs.							
6.	Practical arts classes should be eliminated so that students can have more time for more academic subjects.							
7.	After taking practical arts classes, most students have an increased knowledge of careers.							
8.	Practical arts assists students in planning future studies.							
9.	The "hands-on" experiences students have in practical arts give them a more realistic look at the world of work.							
10.	Practical arts generates an increased curiosity about careers on the part of many students.							
11.	Practical arts helps students develop an increased awareness of themselves as future participants in the world of work.							
12.	The "occupational cluster" concept is an effective mode of teaching practical arts.							
13.	I often feel overworked due to my increased responsibilities as a practical arts teacher.							
14.	I think I do an effective job as a practical arts teacher.							
15.	Periodic inservice and/or workshop training in practical arts is important in the maintenance of my professional competency.							

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	SA	A	SWA	U	SWD	D	SD
16. Employers who participate in our practical arts field trips always strive to make visiting students welcome.							
17. Parents in this community encourage their children to take practical arts classes.							
18. The attitude of my fellow faculty members toward the practical arts program is negative.							
19. Our principal has a positive attitude toward the practical arts program.							
20. The guidance counselor(s) thinks practical arts is a worthwhile program.							
21. Vocational interest and/or ability tests are an integral part of student career and curriculum guidance at this school.							
22. Career guidance is the joint responsibility of the counselor(s) and the teachers at this school.							

V. Please provide the following information regarding the CLASS COMPLETING THE STUDENT QUESTIONNAIRES.

1. Number of weeks this cluster is taught. _____
2. This class is: _____a) elective _____b) mandatory
3. Please check one answer in each of these columns that best describes the class composition of this group:

CLASS SIZE	FAMILY BACKGROUND	ACADEMIC ABILITY
___Too large	___Mostly low family income levels	___Mostly low academic levels
___Too small	___Mostly high and/or average income levels	___Mostly high and/or average academic ability levels
___Appropriate	___Cross-section of different income levels	___Cross-section of different academic ability levels

4. a) Check in Column A the occupational cluster covered in this class.
   b) Check in Column B all occupational clusters which you teach.

	A	B	
1.	___	___	1. Agribusiness, Natural Resources and Environmental Occupations
2.	___	___	2. Business and Office Occupations
3.	___	___	3. Communications and Media Occupations
4.	___	___	4. Construction Occupations
5.	___	___	5. Consumer and Home Economics Occupations
6.	___	___	6. Fine Arts and Humanities Occupations
7.	___	___	7. Health Occupations
8.	___	___	8. Manufacturing Occupations
9.	___	___	9. Marketing and Distribution Occupations
10.	___	___	10. Public and Personal Service Occupations
11.	___	___	11. Recreation and Hospitality Occupations
12.	___	___	12. Transportation Occupations
13.	___	___	13. Me, Money, and Careers

APPENDIX D

Practical Arts Program Counselor Questionnaire

COUNSELOR

I. Please check or complete the following information about yourself:

1. Male _____ Female _____

2. Provide your number of years experience in each:
   _____ Non-teaching work experience
   _____ Teaching experience
   _____ Practical arts teaching experience
   _____ School guidance experience

II. Please rate each of the following aspects of YOUR SCHOOL PROGRAM.

	QUALITY (Excellent 5 4 3 2 1 Poor)	QUANTITY (Adequate 5 4 3 2 1 Inadequate)
Teaching materials and supplies used in practical arts program.	[] [] [] [] []	[] [] [] [] []
Equipment used in teaching practical arts.	[] [] [] [] []	[] [] [] [] []
Career information available to students.	[] [] [] [] []	[] [] [] [] []
Testing of students for vocational interests.	[] [] [] [] []	[] [] [] [] []
Testing of students for vocational ability.	[] [] [] [] []	[] [] [] [] []
Assisting students with career and curriculum guidance.	[] [] [] [] []	[] [] [] [] []
Preservice training for practical arts program personnel.	[] [] [] [] []	[] [] [] [] []
Inservice and/or workshop training for practical arts program personnel	[] [] [] [] []	[] [] [] [] []

III. Please indicate the degree of support provided by each of the following in the development and/or implementation of the practical arts program in your school. Place a check (✓) in the appropriate box that most closely matches your opinion.

	Substantial Support	Much Support	Moderate Support	Minimal Support	No Support
Principal					
Practical arts teaching staff					
Other faculty members in your school					
Parents					
Community resource persons					
High school career education staff					
State education personnel					
University faculty					
Other (please specify) _____					

IV. Please respond to each of the following items regarding practical arts in YOUR SCHOOL.
Check your response using the following scale:

Strongly Agree	- SA
Agree	- A
Somewhat Agree	- SWA
Undecided	- U
Somewhat Disagree	- SWD
Disagree	- D
Strongly Disagree	- SD

	SA	A	SWA	U	SWD	D	SD
1. I feel that practical arts classes are doing an effective job of providing students with an exploration of careers.							
2. Practical arts classes are appropriate for this age student.							
3. Students are genuinely interested in the subjects covered in practical arts.							
4. The subjects covered in practical arts are not challenging to students.							
5. Practical arts classes contribute to prevention of student drop-outs.							
6. Practical arts classes should be eliminated so that students can have more time for more academic subjects.							
7. After taking practical arts classes, most students have an increased knowledge of careers.							
8. Practical arts assists students in planning future studies.							
9. The "hands-on" experiences students have in practical arts give them a more realistic look at the world of work.							
10. Practical arts generates an increased curiosity about careers on the part of many students.							
11. Practical arts helps students develop an increased awareness of themselves as future participants in the world of work.							
12. I often feel overworked due to my increased responsibilities incurred as being involved with practical arts.							
13. Our practical arts staff are effective teachers.							
14. Periodic inservice and/or workshop training in practical arts is important in the maintenance of my professional competency.							

	SA	A	SWA	U	SWD	D	SD
15. Employers who participate in our practical arts field trips always strive to make visiting students welcome.							
16. Parents in this community encourage their children to take practical arts classes.							
17. The attitude of my fellow faculty members toward the practical arts program is negative.							
18. Our principal has a positive attitude toward the practical arts program.							
19. The practical arts staff thinks their program is worthwhile.							
20. Vocational interest and/or ability tests are an integral part of student career and curriculum guidance at this school.							
21. Career guidance is the joint responsibility of the counselor(s) and the teachers at this school.							

APPENDIX E

Cover Letter to Principals from State Practical Arts Unit

COMMONWEALTH OF KENTUCKY

Department of Education

BUREAU OF VOCATIONAL EDUCATION

FRANKFORT 40601

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March 17, 1977

Principal Name
School Name
Address

Dear Principal Name:

One important responsibility of the Practical Arts Unit of the Bureau of Vocational Education is assessing our state-wide efforts by monitoring the progress achieved in representative school programs. Our office has contracted with Western Kentucky University to conduct a survey of twenty randomly selected ninth grade practical arts programs. This study is being conducted as part of Western's efforts in surveying the state program. Name of School was one of the schools randomly selected. We hope that you will participate in this endeavor, as we think the study is vitally needed. Your superintendent has given his approval of this effort and has suggested that we contact you.

This study will examine the state-wide program--reporting results in summary form only. Confidentiality of responses will be ensured; no results will be identified by school or individual.

Both our staff here at the Practical Arts Unit and the staff at Western's Center for Career and Vocational Teacher Education greatly appreciate your support and assistance with this effort. With your cooperation we feel that the resultant findings will be meaningful and useful to all who are involved with practical arts programs.

Sincerely,

Douglas McKinley, Director
Practical Arts Education Unit

DMcK/slr

cc: Superintendent

APPENDIX F

Cover Letter to Principals Explaining Project

WESTERN KENTUCKY UNIVERSITY

BOWLING GREEN, KENTUCKY 42101

Center for Career and
Vocational Teacher Education

Date

Principal Name
Address
City

Dear Mr. _____:

As I related to you in our phone conversation on date, Western Kentucky University in cooperation with the Practical Arts Unit, Bureau of Vocational Education, is conducting an examination of current practical arts programs in Kentucky schools. School name was one of twenty schools randomly selected to participate in this project, and I was quite pleased that you agreed for your school to be involved. As you already know, your superintendent is aware of this project and has also pledged his support.

To briefly review my explanation of this project, minimal disruption of your school routine will be involved. All that will be required is completion of a short questionnaire by you and the following people at your school: name, counselor; name, practical arts teacher; and one ninth grade section of teacher's practical arts classes.

The study will examine the overall state practical arts program. Data will be reported in summary form only, and individual responses will be confidential. Questionnaires are to have no identifying respondents' names and are to be placed in separate envelopes and sealed when completed.

This study will report the effectiveness of practical arts programs across the state and will allow recommended refinements as they are applicable. I will send a copy of the final report to you upon project completion.

Please complete the questionnaires by April 20, 1977, and mail them to my office in the prepaid manila envelope we are leaving at your school. If you or your staff have any questions or problems pertaining to this project, please call me at (502) 745-3441.

I greatly appreciate your cooperation in this endeavor.

Sincerely,

Susan B. Adams
Project Administrator

cmb

APPENDIX G

Cover Letter to Teachers Explaining Project

WESTERN KENTUCKY UNIVERSITY

BOWLING GREEN, KENTUCKY 42101

Center for Career and
Vocational Teacher Education

Date

Teacher Name
School Address
City

Dear _____:

Western Kentucky University, in cooperation with the Practical Arts Unit of the State Bureau of Vocational Education, is conducting an examination of current practical arts programs in Kentucky schools. Teachers, counselors, principals and ninth-grade students from twenty randomly selected Kentucky schools affiliated with practical arts are being asked to participate. School name was one of the schools selected, and your principal and superintendent have pledged their support for this effort. I also need your help with this project, as your name was selected as the participating practical arts teacher from school name. Your cooperation in this endeavor will be greatly appreciated.

You will be responsible for the completion of two short questionnaires--one to be completed by you, and one to be completed by a section of your ninth grade practical arts classes. Previous administrations of the student questionnaires suggest that approximately 5-10 minutes are required for completion of the forms. If you have more than one section of ninth graders, you may select whichever class you wish. I have enclosed a direction sheet for administering the questionnaire to your students.

The study will examine the total practical arts program in Kentucky. Therefore, data will be reported in summary form only, and individual responses will be confidential. Questionnaires are to have no identifying respondents' names and are to be placed in separate envelopes and sealed when completed.

The study will report the effectiveness of practical arts programs across the state and will allow recommended refinements as they are applicable. I will send a copy of the final report to you upon project completion.

Please complete the questionnaires by April 20, 1977, and your principal will mail them to my office in the prepaid manila envelope we are leaving at your school. If you have any questions or problems pertaining to this project, please call me at (502) 745-3441.

With much gratitude for your cooperation in this endeavor, I am

Sincerely yours,

Susan B. Adams
Project Administrator

cmb
Enclosure

APPENDIX H

Teacher Instruction Sheet for
Administering Student Questionnaires

INSTRUCTION SHEET
FOR STUDENT QUESTIONNAIRE

TEACHER: After distribution of questionnaires, direct students as follows:

1) This is not a test. It is a questionnaire sent by Western Kentucky University to see how you feel about your practical arts classes. Students in twenty practical arts classes across the state are filling these out.

2) Do not write your name on the form.

3) Remove the envelope stapled to the form. After you have finished filling out the form, fold it, place it in the envelope and seal it.

4) I will not be looking at your answers, and no one will know who completed the forms. Please read each question all the way through and answer it truthfully. You may begin...

5) (AFTER ALL FORMS ARE COMPLETED) Now fold your questionnaire, place it in the envelope and seal it. Be sure your name is not on the form. Place your envelope in this manila envelope.* (*Large manila packet provided)

TEACHER: I. Complete your teacher questionnaire. Place in provided envelope and seal.

II. Return all questionnaires to your principal in the provided manila packet. Do not seal the packet until your principal has put his questionnaire and the counselor's questionnaire in it.

APPENDIX I

Summary of Areas Measured By ACD Comparing Higher Mean Scores of Eighth Grade Practical Arts Students and Mean Scores of Eighth Grade Non-Practical Arts Students

Table A

SUMMARY OF AREAS MEASURED BY ACD COMPARING HIGHER MEAN SCORES OF EIGHTH GRADE PRACTICAL ARTS STUDENTS AND MEAN SCORES OF EIGHTH GRADE NON-PRACTICAL ARTS STUDENTS

Practical Arts Higher Mean Scores in These Areas	Non-Practical Arts Higher Mean Scores in These Areas	Same Mean Scores
Knowledge of Occupational Characteristics (Male, Female, Total)	Knowledge of Occupational Requirements (Male)	Exploratory Occupational Experiences in Business Sales and Management (Total)
Knowledge of Occupational Preparation Requirements (Female, Total)	Total Exploratory Occupational Experiences (Male)	Exploratory Occupational Experiences in Business Operations (Male)
Total Exploratory Occupational Experiences (Female, Total)	Exploratory Occupational Experiences in Social, Health, and Personal Services (Male)	
Exploratory Occupational Experiences in Social, Health, and Personal Services (Female, Total)	Exploratory Occupational Experiences in Business Sales and Management (Male)	
Exploratory Occupational Experiences in Business Sales and Management (Female)	Exploratory Occupational Experiences in Natural, Social, and Medical Services (Male, Total)	
Exploratory Occupational Experiences in Business Operations (Female, Total)	Exploratory Occupational Experiences in Creative and Applied Arts (Male)	
Exploratory Occupational Experiences in Technologies and Trades (Male, Female, Total)		
Exploratory Occupational Experiences in Natural, Social and Medical Services (Female)		
Exploratory Occupational Experiences in Creative and Applied Arts (Female, Total)		
Career Planning Knowledge (Male, Female, Total)		
Career Planning Involvement (Male, Female, Total)		

APPENDIX J

Summary of Areas Measured By ACD Comparing Higher Mean Scores of Eighth Grade Practical Arts Students and Eighth Grade National Norm Mean Scores

Table B

SUMMARY OF AREAS MEASURED BY ACD COMPARING HIGHER MEAN SCORES OF EIGHTH GRADE PRACTICAL ARTS STUDENTS AND EIGHTH GRADE NATIONAL NORM MEAN SCORES

Practical Arts Higher Mean Scores in These Areas	National Norm Higher Mean Scores in These Areas	Same Mean Scores
Knowledge of Occupational Characteristics (Male, Female, Total)	Knowledge of Occupational Requirements (Male)	Exploratory Occupational Experiences in Creative and Applied Arts (Female)
Knowledge of Occupational Preparation Requirements (Female, Total)	Total Exploratory Occupational Experiences (Male, Total)	
Total Exploratory Occupational Experiences (Female)	Exploratory Occupational Experiences in Social, Health, and Personal Services (Male, Female, Total)	
Exploratory Occupational Experiences in Technologies and Trades (Female, Total)	Exploratory Occupational Experiences in Business Sales and Management (Male, Female, Total)	
Career Planning Knowledge (Male, Female, Total)	Exploratory Occupational Experiences in Business Operations (Male, Female, Total)	
Career Planning Involvement (Male, Female, Total)	Exploratory Occupational Experiences in Technologies and Trade (Male)	
	Exploratory Occupational Experiences in Natural, Social, and Medical Services (Male, Female, Total)	
	Exploratory Occupational Experiences in Creative and Applied Arts (Male, Total)	